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A STUDY IN PERSONAL HYGIENE.

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I.

KEEPING WELL.

Personal Hygiene is as old as civilization. Indeed savages give some attention to it. There is a universal interest in health. The great need of health in the individual for efficiency, morality and happiness, and in the race for its development and larger life, has stimulated this study.

As a basis for the study I take the papers in answer to the following questionnaire on "Keeping Well" sent out by President Hall.

TOPICAL SYLLABUS. NO. 21.

(Academic Year 1903-1904.)

KEEPING WELL.

Will you kindly write down, using the points below only as suggestions, what you have done in the past or now do to increase your health and prevent disease? Be frank and confessional, stating sex and age. The report will be confidential, and it is hoped the comparative study will help others. Answer only points that appeal to you.

1. What kinds of ill health have you chiefly feared from heredity, personal experience with disease, or sickness of friends, and what have you done or are now doing to avert general or special dangers?

2. Have you ever affected or desired slight but elegant invalidism? How did you first realize the advantages of the most robust health, and to what changes of regimen did this hygenic revival prompt?

3. What do you eat or drink, or refrain from, to be well? State habits in regard to chewing, eating slowly, vegetable or meat diet, sweets, eating much or little, regularity, hearty or dainty breakfasts or suppers, social dinners, exceptional things for health, tea, coffee, cocoa, soda, drinking with or at or between meals, etc.

4. Mention any kind of medicine which you have used; tablets, nostrums, drugs, ointments, salves, plasters, patent medicines, home cures, grandmother's herbs, etc., or with which your friends have had experience.

5. State your experience with toilet soaps, rubbing, cold or hot bath, massage, manicure, cosmetics, treatment of hair, skin, complexion, bust, hands, nails, teeth, feet. What do you do believing it of special value to keep fresh, beautiful or young?

6. State your habits in regard to sleep, regularity, ventilation, bed, clothing at night, sleeping alone. Have you taken anything to aid sleep, and, if so, give your experience with it? How have you erred in sleep hygiene, midday siesta, eating or drinking or not doing so as preparation for sleep? What are your modes of getting to sleep?

7. Exercise. Tell how you exercise, how much, time of day, environment. Do you ascribe special value to particular forms? State your views, experiences and observations generally.

8. Dress. Give facts in regard to amount, parts most and least protected, shoes and feet, hands, corsets, special articles worn.

9. Work and study. What can you mention in respect to dangers and safeguards, postures, amount, kind, time of day?

10. What do you do against inherited or family tendencies to disease, *e. g.*, consumption, nerve troubles, insanity, dyspepsia, constipation, gray hair or baldness, tendency to fevers, bleeding, headache, anemia, colds, impure blood, rheumatism, heart troubles, etc.? State your secret fears and what you do or have done. How do you feel about hereditary handicaps? Have you ever blamed parents?

11. In times of epidemic, what have you done to protect yourself from infection by germs that enter the system in water, milk, air, etc.?

12. Have you had experience with quacks or advertisers and their nostrums or panaceas, or tampered with drugs, opiates, or stimulants, and, if so, on what theory and with what result?

13. If you have had a fit of sickness, how has it affected your resolves and practices of personal regimen? Must one be sick to learn? What experiences have you gained that others

might profit by in the philosophy, art, or science of keeping well? Have you derived special help from others' counsel, and, if so, how and what?

14. Have you general views about exposure, toughening, coarse fare, roughing it, treating health harshly to make it vigorous versus great and constant care to avoid every excess and keeping far within the bounds of danger?

15. Will you state your views about regimen at monthly periods if you are a female, or about sex and health if you are a male?

16 State your views on the relation of mental states and environment to health.

17. Can you sketch an ideal life, day and night, summer and winter, of body and mind, if your sole aim were to keep at the very top of your condition and live as long as possible? For if health is wholeness or holiness, is not this the highest end of life and the heart of all education, so that to be good and wise is to be well?

It has been the purpose of the questionnaire to get the health habits of intelligent people, those interested in health, morals and education. Personal hygienic experience has been sought, not theories. Four hundred and fifty manuscripts have been sent in, and many of them show evidence of thought and self-examination. They have been prepared by students in normal schools, colleges and universities; by teachers in the public schools, fellows, instructors and professors in the higher institutions of learning; by physicians, ministers and laity. The value of the reports is qualitative. However, the quantitative side is often suggestive. They come from Massachusetts, New York, New Jersey, Pennsylvania, Ohio, Indiana, Kansas, Utah and California. Poland is also represented.

There are some who believed the questionnaire, "Keeping Well" would throw those answering it on the morbid "tack." The manuscripts do not show this. Comparatively few men and women are ready to speak of their ills. Most are prone to conceal them. Should the questions seem at times to have "tapped" the morbid in the frequent desire for health, it may be said that the papers manifest average good health and that the wish is for more health, a strong desire to get at the very "top" of one's being. In the answers on fear of disease, heredity, the toilet, patent medicine, quacks and sex hygiene I have felt a reservation lying behind the facts given, significant as many of them are. One's personal hygiene and health are pretty much his most private life and self and it has not been an easy matter to get at the facts necessary for this study. In a teachers' institute where I was giving a series of lectures on

education and hygiene to six hundred teachers, two hundred and fifty voluntarily took the questionnaire to answer it. Only eight did so. A superintendent of city schools said he would send me fifty manuscripts from his teachers. He could only send nine. A college professor particularly interested in personal hygiene and in getting the questionnaire before his students, gave them the option of answering it or taking a difficult examination in physics. When they saw the two lists of questions, nearly all chose the examination. From two universities, with the vice-president of one and the dean of the other personally interested in my study, I received two manuscripts. However, I have been fortunate and greatly encouraged in many quarters, particularly in the educational institutions that regularly answer the questionnaires sent out by Clark University.

In chapters I and II, I shall be objective, presenting simply the facts from the manuscripts, withholding largely my personal conclusions.

The Fear of Disease.

Of the 350 who answer groups of questions 1 and 10, 70% fear disease. Of the 245 who fear disease, 38% fear hereditary diseases or tendencies to disease; 33% fear certain diseases, having heard or read of them; 16% from having seen disease; 13% fear diseases from experience, that is, from having had them.

Diseases feared through heredity. 30% fear consumption; 13% heart failure; 13% rheumatism; 12% nervousness in some form; 10% stomach trouble; 8% insanity; 8% cancer; 7% Bright's disease; 5% headache; 3% intestinal weakness; from 1 to 2% paralysis, scrofula and eye weakness.

Diseases feared through hearing or reading of them. Smallpox, 25%; diphtheria, 18%; scarlet fever, 18%; typhoid fever, 10%; consumption, 10%; cancer, 8%; heart disease, 3%; appendicitis, 3%; lockjaw, 2%; pneumonia, 2%.

Diseases feared, having been seen. Consumption, 56%; cancer, 15%; pneumonia, 11%; stomach trouble 11%; then follow typhoid fever, appendicitis, diphtheria, scarlet fever, rheumatism, nervousness and paralysis with lower per cents.

Diseases feared, having been experienced. Typhoid fever, 20%; pneumonia, 20%; stomach trouble, 15%; rheumatism, malaria, fever, appendicitis, diphtheria and nervousness follow with lower per cents.

To show the spirit of the answers to the questionnaire and to enable the reader to make his own inferences, I shall quote from the papers from time to time. Space, however, will permit only of a few typical answers.

M., 46. "I inherited gastric trouble and must attend carefully to dieting. I blame my parents for my poor constitution and still more for not insisting on my care of the stomach and dieting earlier."

M., 46. "Fear Bright's disease through heredity. I am avoiding all intoxicating drinks and spending much time on my feet in the open air."

F., 20. "Fear consumption and insanity. Mother died of consumption, father died insane. Have a feeling of dread that I shall be a victim to one or both diseases. This feeling has the greatest influence on my life. I always feel handicapped."

F., 28. "Sometimes I have blamed father that he inflicted upon us all the dread of his illness—nervousness. As to mother, she was too young to understand when she married, but father knew."

M., 21. "Have often feared nervous disease. Do nothing against family tendencies, but have often blamed my father for marrying and having children, all of whom are nervous and unhappy because of ill-health."

F., 24. "I do nothing but try to live hygienically. I often blame my parents and seeing my own children pale, nervous and ill, I blame myself, for I ought not to have married."

F., 19. "I fear insanity from the nervousness which I inherit and feel handicapped. Believe that persons who are nervous in a marked degree have no right to bring children into the world to suffer as nervous children do."

F., 19. "Have feared insanity from heredity; try to avert it by being careful not to overtax my nerves in any way, especially subjecting myself to undue excitement. I try to keep from becoming gloomy and despondent and guard against worry in any form."

M., 24. "Do not exactly blame my parents for my inherited weakness, but do not think they did me justice in not giving me counsel in overcoming these inheritances. Though I feel keenly the handicap, I feel more keenly what I have lost through not having been advised by my parents. I worried many years and spent much money over what I feared was an inherited sexual weakness, finding out only recently that I am sexually sound."

These few cases are sufficient to show what a nightmare weight hereditary fear, whether well founded or imagined, is likely to become.

Fear through having seen or heard of disease.

F., 40. "When a child, I feared greatly hydrophobia, lockjaw and leprosy."

F., 19. "When fifteen, I feared leprosy, as I had heard so much about it."

F., 19. "I avoid sitting with my right knee crossed over my left, as I have heard it said that this causes appendicitis."

F., 20. "When I was younger, I had a secret fear that I might die of consumption. So I used to carry a horsechestnut in my pocket, for I had heard some one say that this was a good remedy."

F., 19. "I had a secret dread of leprosy, and many a time I have thought I had it, and would imagine my fingers and toes dropping off. I also dreaded lockjaw and was always careful to dress every little scratch lest I should get it."

F., 18. "I used to fear diphtheria very much. When I was twelve I had two friends die of it. I did not wish to let my parents know my fears, so when alone I used to wash my throat out with different kinds of medicine."

F., 19. "Have always feared smallpox because when a child, I saw a woman who had been afflicted with the disease and ever after when I heard of smallpox it made me shudder, for the image of her much disfigured face immediately came up in my mind."

F., 19. "I fear cancer. However, there is no tendency to it in the family, but when I was eight I played with a child whose aunt died of it and my playmate used to tell me all about it. Then a neighbor died of tetanus caused from cancer when I was twelve. I heard my brother say that tomatoes caused cancer. Preserved tomatoes were my favorite sweets, so I just quit off and told my people that I did not like them any more."

To the question, "What are you doing against inherited tendencies?" the following answers are typical:

Consumption. "Live hygienically;" "Attend to general health;" "breathe deeply and slowly, completely filling the lungs;" "exercise freely;" "live a rigorous out-door life;" "guard against exposure;" "sleep in well-ventilated room and take long walks;" "keep away from consumptives;" "avoid over-tiring and give care to a nourishing diet." "take much fresh milk and raw eggs;" "make use of chest development exercises night and morning;" "keep dry and warm and out of drafts."

M., 43. "While inheriting a fairly good constitution, still at twenty I showed signs of weak lungs like my father. For several years I took daily exercise in deep breathing until I developed a chest measurement surprising to myself and friends who knew me as a boy."

F., 18. "Feared weak lungs from heredity. To strengthen them I have used my knowledge of the Swedish system of physical culture to formulate a special series of exercises adapted to my needs. These exercises are for flattening the shoulder blades, chest expansion and better respiration. I take these exercises morning and night. I take long walks and row much."

Nervousness and tendency to insanity. "Do not worry;" "exercise much in open air;" "avoid all excitement in reading, hearing and seeing;" "give care to diet, sleep, exercise and recreation;" "do not over-work;" "try to keep myself under control;" "take an occasional tonic;" "keep down excitement and despondency."

Heart weakness. "Avoid over-exertion;" "keep quiet;" "work only in moderation;" "no running, no rushing;" "Control my temper."

Rheumatism. "Always wear woolen underwear;" "avoid all exposure;" "give special protection to the limbs;" "attend to general health;" "keep from drafts and dampness;" "avoid meat."

Kidney weakness. "Keep dry and warm;" "avoid all exposure;" "special protection to the parts of the body near the kidneys;" "avoid brackish and hard water;" "live in open air and abstain from all alcoholic drinks;" "try to keep my general health at its best."

Constipation. "Drink much water;" "eat much fruit such as prunes;" "exercise freely;" "walk much;" "avoid sitting much;" "knead the abdomen;" "eat grated carrot before breakfast;" "give care to the food eaten;" "eat greens and lemons;" "take trunk-twisting exercises before going to bed."

Stomach weakness. "I diet;" "refrain from pastry, cheese and fats;" "drink much water and avoid fats and sweets;" "use fruit and milk;" "refrain from beans, cabbage and pork;" "drink much hot water;" "eat slowly and chew thoroughly;" "eat many vegetables;" "refrain from coffee and tea;" "no ice water;" "curb the appetite;" "avoid pickles, acids and condiments;" "massage the stomach;" "take a little exercise, but not violent, after each meal;" "avoid work for at least a half hour after the meal;" "make use of good cheer and entertainment at meal time."

It is readily seen from these partial answers taken from the papers, many of which are written out in much detail, that those who fear disease through heredity understand something of hygiene, and some are doubtless doing all for themselves that can be done. The questionnaire submitted to the ignorant and lower classes would, without doubt, call out a very different type of answers. A few seem to underestimate their hereditary tendency, while others have a morbid fear.

Affecting Invalidism.

Have you ever affected or desired slight but elegant invalidism? One hundred and twelve answer affirmatively and about an equal number negatively. Those who have done so, say they did so out of "mere fancy;" "wanted sympathy;" "wanted to be delicate and was not;" "like to be petted;" "wanted the people to bring flowers;" "sister was delicate and got the most good things;" "wanted to attract attention;" "admired paleness;" "weighed too much;" "wanted to get out of doing work;" "a delicate friend could have her own way;" "wanted to be fussed over;" "desired care and company;" "wanted others to have anxiety for me;" "did n't want to go to school or church;" "simply enjoyed it."

Ailments feigned. Headache, toothache, backache, "feeling badly," attempts to prolong sickness having recovered, "hurt myself," affecting deafness, lameness and eye-trouble. Twelve report as having greatly desired to faint at school or church or in some public place to be the centre of attraction, be carried from the crowds and taken home in a carriage amid the many whispers, "Poor girl how pale she is! How sorry I feel for her!"

The papers indicate that it is the feminine sex that is given to feigning illness. Boys do not want "to be delicate," "pale,"

"thin," and "weak," and do not care to be "fussed over." However they do assume indisposition to get out of doing work. The writer has done so to get rid of home and school tasks. The age of feigning illness is from eight to seventeen, more particularly from twelve to fifteen.

How did you first realize the advantages of the most robust health? "Seeing others ill;" "health in others;" "poor health of father;" "illness of sister;" "real sickness on my part;" "wanted to become beautiful;" "did not want to be called 'thinny;' " "wanted to become an athlete;" "being really miserable;" "meeting robust, jolly, bright associates;" "affecting illness, induced a real illness;" "the various opportunities good health brings;" "strain of work in the high school;" "wanted to be able to do as others;" "pride in looks;" "only the strong and well could study."

F., 18. "Merely wanted to be delicate, thinking it was feminine. Became disgusted with my notion in seeing others affecting illness."

F., 17. "Used to be deaf, and a long time after I could hear I feigned deafness. A long spell of typhoid fever induced me to feign no more."

F., 18. "After an illness, I enjoyed being an invalid as I received special attention, unusual delicacies and much care. Toothache led me to appreciate being well."

F., 19. "Wanted to faint in church and be carried out. Became tired of being sick, resolved to improve, got up early, drank milk, hardened myself and by the end of the summer was well."

F., 19. "At thirteen, I greatly admired a thin, pale, sunken-eyed girl. I thought her so lovely and tried to be like her. I used to feel my ribs to see if I were getting thin. I came to realize the value of health a year ago when I came to the normal school. A girl very active and alway merry appealed to me."

M., 21. "Weighed 190 lbs., and disliked my size; disobeyed the laws of health to reduce it. When I entered college and joined the football team I came to admire strength, combined with speed and activity. I began to reform my evil habits, abstaining from intoxicating drinks, tea and coffee and selected a nutritious diet, drinking much milk."

F., 19. "I longed to be delicate for a school companion was delicate, and her parents gratified her every desire. One day I had a slight headache and concluded this would be an elegant time to be delicate. So I tried to work up mother's feelings by pretending my head ached three times as hard as it really did. I feigned this dreadful headache three days. On the fourth I was taken with a bilious attack and was sick a week. This wholly cured me of pretended illness."

It would be interesting to know how many adults, who having been a little sick, really do enjoy the lingering "after-sickness," the luxury of being still slightly indisposed, with appetite to appreciate all the delicate edibles, and mind to enjoy the flowers, attention of friends, the breakfast in bed with the feeling of growing stronger, all danger past.

Personal Dietary.

What do you eat or drink or refrain from to be well? Two hundred and fifty-five answer this question. 56% say they eat no particular food for health's sake; 44% do. 38% report abstaining from no food on health's account, while 62% are obliged to do so.

Twenty-six per cent. eat much fruit as apples, oranges, prunes and rhubarb, while 22% eat many vegetables for health. The vegetables avoided are usually pickles, cucumbers, radishes, onions, cabbages and dry beans. Only 6% make mention of meat for health and this is beef, while 14% refrain from meat particularly fried meats, pork, veal, ham and canned meats. Some cannot eat eggs raw or cooked in any style. Bread and the cereals are seldom mentioned, graham or whole wheat occasionally. Hot or warm bread is condemned. 20% abstain from pastry; pie, puddings and doughnuts are regarded as unhealthy; 17% eat but little sweets particularly candy; 7% let cheese alone and 6% all grease.

Eleven per cent. drink much water for the health; 9% milk, while 4% must let milk alone. Much more coffee is drunk than tea, yet according to the reports more must abstain from coffee as it brings on headaches, nervousness and dyspepsia. However, there are many who are obliged to drink coffee to ward off these same indispositions. Many take cocoa instead of coffee or tea. Those who have drunk soda water freely have found it injurious. Over and over again water is mentioned as being the only safe drink. The fact is brought out that coffee may be drunk in moderation by many people with good effect, but such excess as two large cups three times a day is to be avoided. One to two cups in twenty-four hours is not excess. Where an equal amount of tea is drunk, its effect is worse than that of coffee.

Regularity of meals. Nearly all eat three regular meals a day. Some few but two, omitting breakfast, while as many eat four times daily. Breakfast and the evening meals are heaviest. With the majority two heavy meals are eaten daily. The time of the light meal depends upon custom, work, section of the country, health and convenience. There is a tendency among students and the professional classes to make the midday meal light, the evening one heavy. The spirit of the papers is strong against the "no breakfast" idea and emphasizes a hearty morning meal.

Habits in chewing. Very few are conscious of how they chew. Most say they eat slowly with a tendency to rapidity. Those who think they chew their food thoroughly believe they should spend even more time in doing so. The import is that

the food is too frequently "bolted down" to be easily and well digested.

Kinds of Food and Amount. Vegetables and fruit are the leading foods. However, there is no tendency to become wholly vegetarian. About all want meat once a day. Many mention meat for breakfast, while others want it in the evening. The average would be meat twice a day. Broiled or roast beef, fish and eggs are often spoken of. Some insist on meat at every meal. The cereals are not often mentioned.

Water as a drink at meal time is gaining in favor. As many drink water as coffee and many more than tea. From one to two glasses of water are drunk at each meal. Some take as many as three glasses. The water drinkers report as drinking from one to four quarts a day. Some drink from a pint to a quart of water on retiring and the same amount before breakfast. This is for stomach, bowels, the prevention of constipation and to induce sleep.

The following quotations will illustrate the personal variation in regimen: "Avoid meat because of rheumatism;" "can eat everything, all agree with me;" "A hearty breakfast necessary for me;" "Could I always have what I wanted, it would be fruit, crackers and water;" "must have meat and plenty of it three times a day;" "refrain from meat because of complexion;" "four glasses of water at each meal and much between;" "three quarts of water a day, before and after meals;" "reducing my flesh by abstaining from vegetables."

F., 17. "Eat and drink everything. Eat a large amount of meat, also vegetables and sweets. Always eat a hearty breakfast and a heavy meal late at night when at home."

F., 20. "Refrain from drinking coffee for when I drink it, I feel a dullness over my entire body. Drink milk instead. I am obliged to deny myself sweets for they impoverish my blood."

M., 43. "Have always eaten simple food and only a few dishes at a meal. In order to insure sound sleep I make my supper of bread and milk, avoiding tea and coffee. Any deviation from the rule brings on nervousness and insomnia."

M., 44. "Believe as my father, who was a distinguished physician, that people eat too much meat generally. My family have it once a day, alternating between flesh and fish. For breakfast we have fresh fruit, apples when we can get them, followed by a cereal, then bread and butter with honey or marmalade."

M., 45. "Seldom have a pie or doughnut in the house, almost no tea and coffee and but a small quantity of meat. Have all been much better since reducing the quantity of meat. Use many vegetables. My children have been brought up on this diet and are free from aches, pains and colds "

M., 58. "Eat light breakfast and heavy midday meal. Besetting sin is over-eating and under-exercising. Must avoid acids, eggs and milk and can eat but little fruit. Cannot eat much fat; get bilious if I do. Have suffered much from constipation. Brown bread and nuts clear me up. Drink weak coffee. Began to smoke and drink coffee at

45. These have helped my constipation and diarrhœa. Eat very fast, scarcely taking five minutes. Don't believe in taking 40 to 50 chews to a mouthful."

M., 45. Must have three meals a day; prefer four and want an abundance of meat at every meal. Like four to six eggs and as many oranges for breakfast. Particularly want coffee and milk for my drink. Want much bread, not the made-up cereals, many vegetables, such as cabbage, potatoes, corn, and tomatoes; pie, cake, doughnuts and cheese; beef in any form, especially broiled and roast; pork, sausage, ham, veal and mutton. I am fond of apples and sometimes eat a peck a day. [This man is a professor in a university, has a robust constitution, is a hard worker, never takes exercise and is irregular in his sleeping habits.]

The varied statements made on the personal regimen make it evident that no universal, formal dietary can be prescribed. What one eats, the amount he eats and when he eats is wholly individual.

The Toilet.

Soap. Much diversity of opinion is expressed concerning the use of soap. Some can use any kind without injury to the skin; others only the best; a few never use soap on the face. The pure glycerine and castile soaps are most highly recommended. "Avoid all highly perfumed soap;" "Can use any soap;" "can only use castile;" "never use soap on my face except when it is very dirty;" "soap, even the best, is bad for the complexion;" "the best of soaps irritate my face;" "my mother got a skin disease by the use of cheap soap."

The Bath. More take the warm bath than the cold and say they get no reaction after the cold bath. All who are able to take the cold bath find it highly beneficial. Those who take the cold bath do so in the morning in the form of a plunge, sponge, or shower, with the water as cold as it will flow from the faucet, then rubbing briskly a few minutes with a coarse towel. Many take a warm bath followed by a cold shower. The warm or hot bath is taken once or twice a week, sometimes daily. As morning is the time for the cold bath, just before going to bed is the time for the warm. Many take the warm bath to induce sleep, finding it relaxing and restful. Some find the warm bath weakening and only take it occasionally for cleanliness.

Those who cannot take the cold bath say, "Brings on rheumatism." "it weakens me;" "can't get up a reaction;" "derive no benefit from it;" "it makes me ache;" "can't get over the chilliness;" "they make me nervous;" "they are of value for a time, then lose their worth;" "can't get up a good circulation for hours after."

Those who can take the cold bath say, "Induces a good circulation;" "it gives me a stimulus for the whole day;"

"most refreshing;" "it invigorates;" "prevents colds;" "gives health and freshness;" "has rid me of 'that tired feeling.'"

Those who take the warm or hot bath say, "It is cleansing;" "prolonged hot bath induces sleep;" "brings rest and sleep;" "quiets my nerves;" "helps me when tired;" "cures my cold."

F., 17. "I must take cold and hot baths to feel well."

F., 20. "Two hot baths a week and a daily cold bath have a delightful effect upon me."

F., 21. "Find my health much better when I take a cold bath regularly every morning on rising. I use the water as cold as it will flow. I am in one minute.

M., 58. "Don't believe in excessive bathing. One bath a week just as cold as the water will flow from the faucet; the room must be heated. The cold bath tones up and excites and freshens the capillary work."

Rubbing and Massage. All testify as to the merits of rubbing the body after the bath. "Rubbing makes my body glow;" "starts vigorous circulation;" "for me rubbing is most beneficial;" "it brings sleep;" "it allays my rheumatism;" "it takes out stiffness;" "it makes me strong;" "it is health giving."

F., 18. "Rubbing vigorously helps my circulation and makes my skin smooth. I take a very hot bath, followed by a dash of cold water, then a brisk rubbing."

F., 19. "Rubbing the stomach promotes digestion; rubbing my feet reduces the swelling; rubbing the body produces circulation."

As yet massaging is not generally practiced and its merits not known. The masseur and his art are looked upon with a little contempt, being associated with beautifying, cosmetics and the like.

"I massage to develop the undeveloped parts of the body;" "I massage to take out the wrinkles I put in at the age of thirteen by constantly frowning;" "massage my arms and neck to fill them out;" "have gotten rid of my black-heads by washing my face in hot water then massaging."

Manicuring. Very few employ a professional manicure. Some say they regard the money paid out as lost. Not all bestow special care upon the nails. Some care for their nails from once to three times daily, others once a week.

Cosmetics. The reports here are meagre. Fewer than a hundred speak of using anything on the face; bay rum and talcum powder are mentioned, the latter being used to take the "shine" off and to absorb perspiration. A few use a complexion powder or face lotions. The indications from daily life are that there is more massaging and a greater use of cosmetics than these returns indicate.

Skin and Complexion. Many are trying to improve the skin and complexion through diet, the cold bath, exercise in open

air and care of general health, regarding the skin as more than "skin deep" and the complexion as depending upon the welfare of the whole body.

"I diet and rub;" "keep the stomach in order;" "keep the bowels open;" "massage and give care to food and sleep;" "drink much water;" "steam for black-heads and rub;" "use lemon and rose-water;" "steam my face every night;" "use benzoin and glycerine;" "hot water on the face, followed by a dash of cold;" "massage for pimples."

F., 19. "Have found those lotions beneficial for the skin that contribute to its natural oil; those injurious that dry it up."

F., 40. "Glycerine and lemon for skin and complexion. These soften and whiten. Some, however, cannot use glycerine for with them it causes hair to grow on the face."

Bust, Hands, Feet and Teeth Only five mention giving care to developing the bust and this through physical culture. The hands and feet, too, have but little attention. Many, but by no means the majority, speak of bestowing great care upon the teeth. Some go to the dentist twice a year to have teeth examined. The teeth are brushed once daily, twice, three times and particularly night and morning and after meals. A tooth powder is used generally once daily. The evidence is that there is a lack of care of bust, hands, feet and teeth.

Care of the Hair. On no other questions have the answers been so varied. "Wash the hair often;" "once a week;" "rarely wash it;" "give it a wet shampoo every two weeks;" "every four months;" "never give it a wet shampoo;" "the frequent dry shampoo;" "burn the ends every new moon;" "every three months;" "twice a year;" "once a year;" "never;" "cut the ends every month;" "twice a year;" "never cut it;" "use tonic;" "salt water;" "alcohol;" "vaseline;" "kerosene;" "borax water;" "tar soap;" "white of egg;" "bay rum;" "never bay rum;" "witch hazel;" "quinine water;" "Danderine;" "Herpicide;" "Seven Sisters;" "Never use anything on it;" "brush the hair frequently;" "seldom;" "never;" "brush it on getting up:" "on going to bed;" "brush it three times a day;" "once a week;" "thoroughly once a month;" "comb the hair always;" "never comb it;" "comb it once a day;" "before breakfast;" "before going to bed;" "braid the hair every night;" "always let it hang loose;" "give frequent sun baths;" "massage the scalp daily;" "massage it once a week;" "shave the hair to the scalp."

F., 20. "Have used Danderine, but I am now using kerosene before I wash my hair."

M., 19. The best thing I have found for the hair is to saturate it in alcohol once a week."

M., 20. "My hair falling out I tried many patent tonics. Finally I had my scalp shaved which brought the hair back again."

F., 23. "Brush my hair daily, and braid it every night; wash it and trim the ends twice or three times a month. My hair is heavy and four feet long."

F., 20. "I clip the ends of my hair every new moon. This has a good effect. I have beautiful hair that reaches to my knees. I give it a good shampoo and massage, rubbing the scalp gently until dry enough to comb."

M., 44. "I am inclined to think wearing a close derby hat constantly has tended to make my hair fall out. I have found a specialist in dermatology who has successfully prescribed to prevent baldness and restore, in part, the lost covering of my scalp."

M., 40. "Growing bald, I sought the best dermatologist in the Middle West, a specialist of renown in a medical school of a well-known university. I spoke of heredity and he laughed saying I should have a full head of hair within three months. I paid him a fancy price and continued the treatment three months without improvement. He changed the treatment, but I could get no druggist to fill the prescriptions. All said the ingredients called for would take all my hair off in a few minutes. I then went East and consulted the best dermatologist I could find. He told me mine was a case of heredity and due to the stretch of skin across the top of the head, no nourishment being afforded the follicles and at my age the heredity could not be changed even with daily massaging. I paid him five dollars for what I regarded sound diagnosis and returned home satisfied."

What do you do to keep fresh, beautiful or young? "Strive to keep well and happy;" "endeavor to be content;" "diet, sleep and exercise;" "a moral life;" "a spiritual life;" "walks, fresh air and bath;" "agreeable companions;" "young people and children about me;" "no worry, no overwork;" "rest, recreation and temperance in all things;" "follow nature," "control the emotions and passions;" "by balance of mental and physical work;" "avoidance of all intoxicants, tobacco, tea and coffee;" "massaging and well-fitting clothes;" "keep cheerful and drive out despondency;" "ventilation and cleanliness."

M., 33. "If the bath and daily play exercises do not keep me young then I am doomed."

F., 19. "To keep young I feel that I shall have to bathe, exercise freely, sleep, have cheerful company and keep in good spirits."

F., 21. "To keep young and fresh I shall be obliged to go to bed early, live much out of doors, take daily cold bath, eat in moderation and not worry."

F., 22. "I believe a calm, contented mind, trust in the spiritual laws instead of the material are the most valuable for producing youth and beauty."

M., 45. "Proper diet, clean, normal life, active and contented mind, out-door life and association with young people. My wife is an excellent example of this."

Sleep.

Number of Hours. The reports vary from 6 to 11 hours of sleep out of the twenty-four. Eight hours is the usual amount. Two and a half times as many persons take more than 8 hours than less; three times as many report 9 hours than 7.

Time of Sleeping. The usual time is from 10 P. M. to 6 A. M. Those who take 9 hours sleep from 9 to 6 or from 10 to 7. Some retire at 11 and get up at 7; others at 9 and arise at 5.

Regularity of Sleeping. The majority are regular in their sleeping habits. Many say they must be regular to feel well and accomplish their work.

Nature of Bed and Bedclothing. Most sleep on a medium hard mattress usually hair. Some prefer a hard mattress, others a soft one. Twenty-five per cent. speak of sleeping on feathers, particularly in winter, some the year round. The clothing frequently mentioned consists of two sheets, a blanket, comforter and spread or quilt for winter. "Just enough clothing to be warm;" "light but warm bedclothing;" "not too many covers, they tire me;" "make use of many but they are light;" "the fewer the better, just enough to be comfortable."

A few make no use of pillows. The greater number speak of completely changing the clothes worn in the day.

Ventilation of the Bedroom. One hundred and fifty say they ventilate thoroughly. The phrases used are as follows: "Ventilate very thoroughly;" "give it the greatest care;" "can't rest without good air;" "completely air my room day and night;" "windows must be open in the coldest weather;" "must ventilate or be half dead next morning;" "have a nervous night if the air does not circulate freely."

Aiding Sleep. Very few resort to drugs to induce sleep. Those who have done so, have found the after effects evil. Many take a hot body or foot bath, drink a glass of hot water or milk. Some eat a cracker, an apple, lettuce, onions, or light lunch to bring on sleep.

Mistakes in Sleeping. "Have overslept;" "too much sleep brings headache;" "staying up late disturbs my night's rest;" "an afternoon nap spoils my night's rest;" "not taking enough sleep;" "the habit of sleeping in the afternoon prevents my sleeping at night."

The Afternoon Nap. Here opinion is divided. Many advocate an afternoon nap. The time taken varies from five minutes to two hours; from a half to an hour is the usual time reported. The majority are opposed to the afternoon nap. "If I sleep in the afternoon, I can't sleep at night;" "have often spoiled a night's rest by a day nap;" "I should have cultivated sleeping in the afternoon and thus husbanded my strength;" "I sleep five minutes sitting up;" "must have a nap." "Have made a discovery," said a university president recently. "Have found that I can do much better work by taking an afternoon nap of half an hour."

Eating before going to bed. The greater number speak against it, while some say they are obliged to eat a little be-

fore retiring. "Have eaten at night but it does not agree with me;" "never can eat within three hours of retiring;" "eat late and sleep badly;" "Must eat before going to bed:" "drink water and eat crackers;" "never go to bed hungry;" "If I study late, I must draw the blood from my brain by eating;" "a glass of water is necessary."

Do you sleep alone? Most do. All say it is best to sleep alone. "I rest better alone;" "everybody should sleep alone;" "a delicate person should sleep by himself;" "sleeping with an older person does harm;" "I do not sleep alone, but feel better when I do;" "I am rested more in the morning when I sleep alone;" "I should sleep alone could I have my way."

Modes of getting to sleep. Besides eating, drinking and taking a hot body or foot bath to bring sleep, 75 say they have a method which they regularly or occasionally make use of in getting to sleep. These methods are either physical or mental.

The physical methods are wearying the body, relaxing it or some part of it and placing the body in a certain position. The first is illustrated in the physical culture or apparatus exercise before retiring. It may take the form of tiring out the body as suggested in the following statement: "I frequently lie awake and find it necessary to get up, stretch out on the hard floor and there tire out the body. After half an hour of this 'crucifying the flesh,' I am usually able to fall asleep."

The second form of the physical method is seen in the stretching out of the body on the bed, making it lie lax and limp, the limper the more sleep-bringing the condition. In the writer's case, he finds it necessary to inhibit the tension of the muscles of the lower jaw, letting the jaw hang loosely down. As long as the two rows of teeth are firmly together there is no sleep. Studying an eight-weeks old infant recently, I noticed it wavering between sleeping and waking. The muscles of the head, neck and limbs were relaxed and I was wondering why it did not sleep. Presently I saw the index finger of the left hand standing up stiff and rigid by itself. I relaxed it by soothing it down to a restful position, and the babe was immediately asleep. This infant has a nervous temperament.

The third physical mode of getting to sleep consists in placing the body or some part of it in a certain attitude as drawing up the left leg while the right must lie stretched out or *vice versa;* lying on the left side; on the right; lying with the arms stretched parallel with the body; with the arms about the head; lying flat on the abdomen, as a college student says she has done for years; stretch out on the flat of the back; wearying the muscles of the eye by a fixed gaze at some object; the hypnotic influence, perhaps, entering in.

Under the mental forms may be mentioned wearying the mind by work, strain, deliberately thinking hard on some difficult problem to the point of mental exhaustion; gradually removing mental strain by monotonous humdrum and repetition as in saying the alphabet over and over; counting, reading or being read to; reciting familiar verses; running over tables of well-known dates; humming a lullaby or dreamy air; being sung to; soothing, soporific music from piano or harp; falling water. Irving speaks of being lulled to sleep by the cataract of Lindaraxa and the music coming up to his chamber window from the Spanish serenaders below. All know the power of the "swish" of water, the murmuring stream, the slow eaves' drip, the fountain's flow, the rain on the roof to bring on sleep. The influence of music to quiet the nerves as well as stir them has long been recognized. There is the rhythm of activity and that which induces repose; the latter is doubtless the former, lulled perhaps with long, slow reaches, no short stretches of wave-dashings; broad, gentle swells with no rocks near to break upon, to fret and foam,—a limitless expanse of appearing nothingness, no thoughts intense, if any, pale.

Then sleep is brought on by thinking quietly of something pleasant, rather than exciting and disagreeable. A woman writes: "I can't sleep after spending an evening with people I don't like,—those that have no apparent interest in what I am interested." The writer has often fallen asleep by watching the hypnagogic pictures at play.

Mental inhibition is a common mode of getting to sleep. When the mind is preyed upon by some fixed notions, the person resolves to supplant it by endeavoring to think of nothing, making an effort to forget self, reducing it to nothingness, creating a void, inducing mental pictures of vast stretches of darkness.

The following are characteristic answers of getting to sleep: "Habitually read myself to sleep;" "think of a hard problem and try to solve it;" "daydream and say poetry;" "count three hundred;" "lie on my right side and think;" "let my mind wander;" "relax and breathe deeply;" lie on my back stretched out flat;" "scatter my thoughts;" "go to sleep by saying 'sleep,' 'sleep,' 'sleep;'" "work on some question until mentally exhausted;" "think pleasant things;" "lie on my right side with left leg drawn up and the right outstretched;" "head low and both arms to the right;" furnish a room in my mind;" "think of a large flock of sheep going one by one through a small hole;" "listen to the tick of the clock;" "think of the day's doings;" "think of some particular thing;" "try to think of nothing;" "relax, determine to sleep and I do."

Many have no trouble in getting to sleep: "I lie down and am asleep;" "asleep as soon as I touch the bed;" "any method makes me the wider awake;" "never try to go to sleep, simply go;" "touch the pillow and know no more;" "shut my eyes and am asleep;" "can scarcely keep awake while I undress."

Exercise.

Form of exercise. Two hundred and forty-five make special mention of walking as a part of their daily exercise. Ninety say they take no other. From 15 min. to 3 hrs. daily is devoted to walking, which varies from 1 to 10 miles. The walks are made into the country, across fields, up hill and mountain, along streams, by lakes, through woods and beautiful residence portions of the city, in parks and the city's environs. Short walks are taken before breakfast, the long ones late in the afternoon.

The other forms of exercise often spoken of are tennis, basket ball, physical culture, bicycle, gymnasium, skating, dancing, swimming, rowing, running. Some speak of croquet, housework, gardening, football, baseball, track athletics, jumping, sawing and chopping wood, fencing, horseback riding, and driving. There is strong opposition to "apparatus exercise," neither gymnasium, nor bedroom apparatus is in high favor, nor the more violent forms of exercise. Nowhere is there the spirit of athletics for athletics' sake. All exercise is for health, rest and recreation. Games and plays are emphasized as diverting the mind from the routine work, hence very valuable.

"I am fond of out-door exercise of all kinds, skating, rowing, walking, playing tennis. Gymnasium exercise I have little use for; besides it does not seem to take my mind off my work."

A physician writes: "My exercise consists in chopping, hoeing and gardening. These are as beneficial as the regular prescribed exercise in the gymnasium and at the same time accomplish more for the welfare of others."

Special value ascribed to particular forms of exercise. "Swimming exercises many muscles;" "tennis exercises all the muscles;" "walking and tennis produce vigorous circulation;" "brisk walks are invigorating;" "exercise connected with games and plays are best;" "skating is a mind rester;" "rowing has given me a better set-up;" "rowing is good for the muscles of the back, chest and abdomen;" "tennis gives muscular exercise and mental rest, lifting weights and the like do not give the latter;" "stretching for the muscles of the abdomen so much neglected;" "gymnastics do not rest the mind;" "long walks and deep breathing are makers of health;" "dancing is good, not too much however;" "I detest gymnastic apparatus."

Exercise a Necessity. "If I do not exercise I am dull and lifeless;" "If I omit exercise I get sleepy and tired;" "the value of proper exercise cannot be estimated;" "valuable as exercise, I have found by sad experience that it should not be violent;" "walks are invaluable to me but violent exercise detrimental."

F., 17. "The girls here in the dormitory who take exercise do their work in less time than those who do not. If I do not walk, I simply 'fool' over my lessons. When I walk I have little trouble in getting them."

M., 38. A physician,—"In summer I take tramps for fishing and gunning. I do a great deal of gardening. I incidentally run several miles a week in my practice. The exercise should not be taken consciously as exercise if is to prove most beneficial to mind and body."

F., College student,—"Walk two hours a day; some days I walk 25 miles; choose the woodlands for my tramps when alone. Occasionally go with a friend. Sometimes I close the day with a twilight walk of an hour seeing all I can about the city and in the sky. I do not look upon walking as a dose prescribed for health and to be religiously taken, but enjoy it. I like the Swedish gymnastics, the crew work on the water and ice but find walking most agreeable in every way. My exercise means a great deal of health aud life to me."

For seven years the writer was a near neighbor of the Rev. Dr. John Peat, bricklayer, preacher, telescope lens maker and traveller, and came to know him well.

It was John Peat's custom to skate whenever there was ice, and to take a daily ten-mile walk up to his death. I count myself a good walker, but at the age of eighty he could readily out-walk me. Three or four times he walked over much of Europe, Egypt and Palestine. At eighty-one he went abroad tramping it alone. He took keen delight in learning to ride a bicycle at eighty. He was never ill, needed no medicine or physician's care. He had his sorrows and financial losses. His life was a busy one. His mind was bright and active until his death. He was always a youth, knew no old age and death was a mere passing.

Dress.

Amount and kind. Men wear about the same amount of clothing the year round, changing the underwear and overcoats to suit the weather. Women generally make greater changes to suit the seasons. The under garments and hose worn are usually cotton. Some wear woolen next the skin the year round to protect against rheumatism. The greater number of women speak of wearing medium-weight clothing. However, many more speak of wearing heavy winter garments than those who mention light. A young lady in ill-health says, "I wear five skirts, four of them of heavy wool, fleeced lined underwear and a chest protector." In contrast I might here mention a

young woman in good health who writes, "I get out barefoot, run in the dust and sand, wade knee deep in water whenever I can."

Parts of the body that need most protection. The feet, hands, chest and throat need most protection. The greater number need to give care to the protection of the feet. However, many wear the same weight shoe the year round. Some make use of heavy soles in damp, severe weather. The majority wear overshoes. Some catch cold through damp or cold feet, while others never, being able to let the wet hose dry on the feet. There are those who are obliged to protect the hands, cold hands meaning a cold body. One person says she catches all her colds through her hands. Some complain of cold ears, back and legs. Often the throat and chest need protection.

Special articles of Dress. Nearly all the women report wearing corset, girdle or corset waist. Most wear corsets, and speak of wearing them 'loose,' but 'loose' seems here a flexible term. Some mention wearing furs; a few speak of a woolen chest protector or bandage across the abdomen.

"I am obliged to wear flannel next my skin in the warmest weather;" "Never wear heavy garments from the hips;" "warm clothing saves energy;" "I have no fear of drafts;" "If I toast my feet when wet I never catch cold;" "Wet feet means a cold for me;" "wet feet never give me a cold;" "My head in a draft means a cold;" "I find myself much healthier wearing light cotton underwear even in winter."

Study and Work.

Number of hours of work daily. Most of the papers are not specific on this point. From one normal school the average amount of time spent in study is 4 hrs. outside of the classroom, laboratories and lectures which amounts to 4 or 5 hrs. daily. In another normal school the average time spent in the preparation of lessons is 6½ hrs.

Time of Study. The recitations and lectures coming mainly in the forenoon, throws the study hours into the afternoon and evening. There is expressed a decided preference for the morning hours for work. The forenoon is recommended as the best time for hard study, the afternoon for lighter work, recreation and exercise, the evening for work that does not over tax the eyes. There is much complaint of crowding heavy work into the night. Many are doing this or must abandon exercise and recreation in the afternoon.

Dangers from over-work. Three speak of the mental work being too long and difficult where one enters no complaint. "I fear a break-down;" "I am ruining my health;" "I am growing nervous;" "I'm so tired;" "Can't rest;" "Never get

to do anything but study;" "so much study makes my head ache;" "have to do more than I ought;" "don't have time to eat;" "can't have time to exercise;" "too much work and I worry;" "have to study on a full meal;" "the work is too hard and long;" "too close application;" "too much night study." These statements are principally from young women in the normal schools. Many in two of these schools seriously object to the hurried lunch period.

Some who feel the work burdensome employ some safeguards as, "Won't study directly after meals or just before retiring;" "I must exercise and sleep;" "More out-door exercise would help my nervousness;" "must have one-half hour after each meal;" "I rest after school and take a nap;" "I study only in the day;" "I became ill and rested;" "exercise in the open air saves me;" "I do less and am more steady, over-work does not pay."

Proper position in reading and study. About half the number reporting give attention to the position of the body in mental work. "My shoulders have become round and my chest hollow from study;" "I study at the table with the head supported by the elbows. This keeps the shoulders up."

The following are a few of the statements as to the best time for study: "The hard work I set aside for morning;" "never study later than ten o'clock without feeling bad effects;" "in the evening I can accomplish little more than mechanical routine;" "I never write or work mentally at night;" "The earlier I get to work in the morning the better I can do;" "saved my health by changing late hours to morning hours of study;" "morning is the best time for study, afternoon next, night poorest."

M., 30. "I do not study late at night. I can do the same work in one-third the time in the morning."

M., 39. "Prefer to work mentally and physically early in the day. I believe late study hours to be very injurious. Those who study best in the evening do so from habit and from bad habit."

F., 40. "I can only do six hours of hard intellectual work a day. I find it best to divide the time morning and afternoon. I can never do my best at night. Monday is my best day, doubtless because of the rest on Sunday."

Protection in Epidemics.

Many say they do nothing in times of epidemics to ward off disease. The greater number give themselves special protection. Little milk and water are drunk and these are boiled. The general health is looked after, the most digestible and nourishing foods taken, much fresh, ripe fruit is eaten, the bowels kept open and care is given to letting air and sunshine into the living and sleeping rooms, and much exercise is taken

in the open air. Some disinfect the clothing and house. Others gargle the throat with a mild germicide or breathe sulphur fumes.

A minister writes, "I try to keep the health of my family at the highest standard in times of epidemics;" a physician, "I have done nothing except to procure as far as possible pure milk and water for myself and family;" a teacher, "I take exercise, particularly at wood-sawing;" a university fellow, "I avoid exposure to the disease and gargle the throat with a germicide;" another physician, "I keep myself immune by taking plenty of fresh air and casting out fear."

Quacks.

The next chapter, "Medicine and Quackery," will treat at some length, this section and number 4 of the questionnaire.

I am led to believe from my investigations among druggists, physicians and quacks that more intelligent people resort to quackery than the returns from the questionnaire indicate. All who report as having had such experience deplore it.

M., 21. "Have had experience with a quack optician through whom I almost lost my eyes. I am now only recovering."

A teacher says, "I paid $20.00 for an electric belt to induce sleep; wore it a while, thought I was a little better but soon threw it away."

The papers from Poland show much faith in quackery. The quack in Poland is usually some old woman herb doctor and the faith element undoubtedly enters into the real or supposed cures. The three following statements are from intelligent Poles, one being a medical student, another belonging to the nobility and has a deep interest in education and psychology.

F., 28. "Yes, quacks have helped my children in eczema and severe fevers. I have also read where an old woman by means of a prayer stopped blood flowing when doctors could not."

M., 21. "The doctors declared as a child I was an incurable consumptive. Mother took me to a woman who called herself an herb doctor. I took the medicine and got well to the great disappointment of physicians."

F., 24. "I myself have had no experience with quacks, but I have seen some marvellous cures by old women through drugs, baths, prayers, and rubbing with an egg. I saw childres, who, at their third year had not walked did walk and servants who were ill were helped in a few days."

Personal Regimen, How Influenced.

Personal illness as influencing resolves and practices. Nearly all say that, while sick, they resolved to live more hygienically when well again; but with most, their resolutions vanished with their pains. Some say they carried out their resolutions, but only after repeated attacks of illness.

"Was careful for a time, then broke;" "with typhoid fever

I resolved but broke;" "carried out my resolutions after repeated attacks;" "kept my resolves one week;" "kept my resolutions only when erysipelas had deprived me of my hair;" "dyspepsia has made me careful of food, neuralgia of clothing."

F., 40. "One spell of sickness resulted in a good resolution which I have kept—not to overwork. Keeping well, however, is a matter of habit rather than of particular resolution, carried out as a result of sickness."

Does one have to be sick to learn? About half who have been sick say "yes," the others "no," while, of all reporting, more than two to one say "no."

"I have always had to be sick to learn;" "some must be sick to learn, not all;" "I have derived great benefit from the ills of others;" "I appreciate health though I have always been well;" "to see others sick is enough to keep me straight;" "one can only appreciate health by being sick himself."

M., 46. "While I had youth and strength I could not realize the importance of health and did not until laid low."

M., 28. "One surely learns from experience, but it need not be personal necessarily. The sight of illness in others has often led me to attempt self improvement, as for instance round shoulders."

Your experiences others might profit from. "For health, fresh air and exercise and don't worry;" "never eat when fatigued;" "apples before going to bed;" "beware of constipation;" "take cold bath every morning:" "a pint of water before breakfast keeps off constipation;" "a cheerful disposition;" "deep breathing;" "exercise in the open air and sufficient sleep keeps me well without medical aid."

Benefit from counsel of others. Many say they have been benefited, while a great number say they have not.

"We only learn through experience;" "mother and friends have influenced me;" "I have derived help from two sources largely—observation of the ills of others and the advice of friends that know. The former has helped me more than the latter;" a physician writes, "I have derived little help so far as I can recall from the advice of others. I have usually gone contrary to their advice and acted on my knowledge of my own organism."

Roughing and Toughening.

The papers here show a wide range of answers, varying from an absolute "no" to just as positive "yes." There is many a "yes" and many a "no" in reservation with a "but" and "if," "and," "yet," "still," etc. There is a strong protest against constant care, over-anxiety, bundling-up, coddling, yet no one seems to advocate the exposure, coarse fare and hard life as in the training of the ancient Persian and Spartan youths, not even that urged by Locke.

Those who believe in roughing it. "Make use of all kinds of weather and exposure to become robust;" "it is nonsense to bundle up against wind and storm;" "mother never was careful with us children and we were always strong;" "I've tried roughing it and find it beneficial;" "roughing, the weather and coarse food make for health."

M., 25. Roughed it six years in the cattle business and have never been so well before or since."

M., 38. "The body ought to be taught to endure. Think confidence in it ought to be cultivated from childhood."

F., 19. I go out in all sorts of weather. Enjoy being out in the rain. I avoid riding unless absolutely necessary and have never felt any ill effects."

M., 21. "Children in their bringing up should be toughened so that they can endure cold, change of air. I have always had colds. Mother kept me too warm."

F., 19. "Mother used to bundle me up. I was always taking cold. Of late I wrap up but little and rarely have a cold. I know a family of children that rough it and are never sick."

Those who do not believe in roughing it. "Have tried roughing it only to bring on illness every time;" "no exposure for a person brought up as I have been;" "from experience I know it not wise to expose myself;" "one cannot be too cautious."

F., 45. "My experience in exposure, coarse fare, roughing it, treating health harshly tends to make me prematurely old and gray."

F., 35. "Have often tried 'the toughening act' only to bring on a spell of sickness. Defying precaution is not the secret of robust health."

M., 22. "There are those, who doubtless are the better off for hard fare and harsh treatment. As for me I prefer to give constant care to keeping far within the bounds of danger."

M., 21. "I can best answer the question by citing two cases I well know. Two young men went to college. One took the greatest care of his body, the other determined to toughen himself, refusing to wear an overcoat in the dead of winter and at other times insufficient clothing. The former is now a professor of physiology, the latter is now in the 'happy hunting grounds.'"

Those who believe in temperate course. "The personal equation must be considered;" "care but not coddling;" "keep within the bounds of common sense;" "discretion at all times;" "rough it but be well protected;" neither bottle up nor expose;" "rough it but not to the point of foolhardiness;" "the secret of health lies in a reasonable amount of exposure."

F., 24. "Constant care I find bad, but the toughening process is risky for delicate children and adults. The hygienic life is the best."

F., 40. "Neither the hardening process nor a constant solicitude about one's health; the latter seems as morbid as the former dangerous."

M., 33. "Much of the so called toughening is foolhardiness. On the other hand it is to be preferred to the puny hygiene which thinks of nothing but keeping well."

F., 20. "Have staid in doors to protect myself and caught cold;

have gone eight miles through the roughest weather and never felt better. I do not believe in little clothing. Had a schoolmate, whose father insisted on toughening her; would not let her wear flannel. She often came to school blue with cold and chattering teeth. She took quick consumption and died."

Sex Health.

Only one hundred females and twenty-five males have written on this question. The meagerness of the reports is doubtless due to modesty, timidity, squeamishness, the dislike of having one's most private life inquired about and ignorance that there is a male sex health or rhythm. Those who have written have done so frankly; have spoken to the point and wholesomely.

Sex Regimen in the Female. Seventeen only out of the hundred are not obliged to give additional care to health at the menstrual period. These say they are as strong then as usual and need not modify their regular regimen. Of the eighty-three who must give special care, the following words and phrases are most frequently used in the reports: "rest," "more sleep," "little physical exercise," "avoidance of all strain," "lifting," "dancing," "running," "removal from all excitement," "but little mental exertion," "no irregularities," "greater care in diet," "clothing," "omission of cold bath," "endeavor to be free from constipation," "care against all exposure or drafts," "damp, cold rooms," "wet feet," "standing too much," "taking time to lie down frequently." "Never over-tax, nor weary;" "take much sleep with mild exercise;" "no violent exercise, no bath;" "do not wear corset, eat but little and drink hot water." "avoid excitement, fright and cold."

F., 24. "Rest during the period, no walks, no exercise. I have found it best to remain in bed two or three days."

F., 20. "At certain times I think it a duty to avoid hard physical and mental work and be careful about nervous strain and exposure. I have known nervous disturbances to result in years of worry and irregularity in health."

A minister writes, "My wife usually stays in bed the first day and is careful during the entire period not to expose herself to cold and dampness. She is training two daughters in the same way, keeping them from school and in bed for at least one day."

F., 28. "I must say too little heed is given to girls during puberty, when they need so much care. Girls and grown up women should remain in bed at least the first two days of the menstrual period; have special diet, no wine, no stimulants, read something quieting. I have used with good results milk, fruit, some vegetables, chicken, and cooling drinks. Girls should not be in school, nor do mental work at this time."

F., 38. Teacher in High School. "Having had no instruction, my first menstrual flow took me by surprise; was greatly frightened, feared I had hurt myself and yet through modesty and mystery I was

afraid to speak to mother. It was March, a raw, cold day, with snow on the ground and ice floating in the creek, but I went down to it and washed my person and my clothing. I was greatly disturbed at the continued flow. I ran to a neighbor girl, a little older than I and told her what had happened. She told me what she knew. This removed me still farther from my mother. The consequences have been that I have scarcely had a real well day in twenty-five years and I was strong and hearty before. With all my suffering, which at times is excruciating, I have spent hundreds of dollars, hard earned, without any permanent results. A thousand times I have thought how much my good mother might have done for me by a few wholesome words, directing my attention to that which by nature is sure to come to every normal female. Mother was not ignorant, but timid."

This case shows the irreparable loss of health and happiness to thousands brought about by the ignorance, timidity, squeamishness or indifference of mothers in advising and training their daughters as regards the menstrual function, and it is just such parental neglect that affords opportunity for patent medicine and quackery.

Sex Regimen in the Male. The male sex regimen is different from that of the female. There is a sort of rhythm of periodic involuntary discharge of seminal fluid, the amount, regularity and frequency of which depends upon the individual, his general health, animality, climate, season of the year, occupation, food and drink, thoughts, leisure, exercise and recreation. Ignorance of this has been the cause of much worry, morbid fear and insanity, and has made thousands an easy prey to quacks, patent nostrums, advertising doctors and unscrupulous physicians. A robust, morally healthy young man, say eighteen years of age, has an occasional, nightly, involuntary emission, perhaps twice a month, possibly once a week. He does not understand it; thinks something wrong, grows fearful, reads "his case" in advertisements, hastens for help and explanation and not only are his fears corroborated, but greatly intensified, and he gladly submits himself to quackery.

A reputable physician gave me an account of two priests who came to him for advice. The young priest had been having nightly emissions that rhythmically came every ten days. He did not understand the law of his sex and was morally and spiritually disturbed. The old priest was sixty-eight years of age. He, too, was disturbed for he feared mental and physical decline as his involuntary emissions, which had occurred regularly twice a month throughout his life, had ceased. Both men were children of Nature, moral and conscientious, but subject to her laws.

The following statements are of interest, showing ignorance on the part of some of the sex-life and its importance to those who understand it:

M., 18. "I know nothing about the sexual organs."

M., 40. "I learned the boys' evil by a vile man suggesting it to me at the age of fifteen."

"Learned to masturbate at the age of ten from a company of boys older than I."

"I have erred not knowing the laws of my sex and shall never get over my mistakes."

"I learned the evil," says a great educator, "at fifteen, but had virtue to get control of myself ere long."

M., 45. A minister,—"Temperance in sex relations is, I believe, a great health preserver. More physical wrecks come from intemperance and abuse here than from any other cause."

M., 21. Student of Medicine,—"I have been tempted and tried, but to be sure men are to keep pure until marriage. This I am doing through exercise of will, work, good, moral society, having none other, music and art and not allowing myself to think on such evils."

M., 19. College student,—"I am positively convinced that dissipation of the sexual forces is a crime which cannot be justified under any circumstance. Perfect health cannot maintain where dissipation is practiced. Every bit of energy is needed. We can't afford to waste any."

M., 21. A teacher,—"Personal purity is a vital problem in a young man's life. I believe that children at the age of ten or twelve ought to be cautiously warned of the danger ahead. I know boys who have wrecked themselves at an early age simply through ignorance of the sexual organs and their use."

M., 46. A physician,—"The organs that give a being his sex constitute the electric plant of the body and this part above all others should be thoroughly understood by both young and old. Without a thorough knowledge of this plant the lights are apt to go out and then how great is that darkness!"

M., 26. University fellow,—"Every boy and girl ought to be taught at home and very early in their youth a knowledge of sex and reproduction, probably by means of the proper kind of books, for the child who feels like going to his parents with such matters is a *rara avis*, and as he is going to learn them, he should get them from eminently respectable sources."

M., 58. Eminent psychologist,—"I believe in temperance and moderation. Seminal fluid excessively discharged affects brain work. A young man should remain absolutely pure and intact until twenty-five or thirty when he should marry. What is sexual excess for one is temperance for another and *vice versa*. The sex relations should be rhythmical. We should follow nature. She is not ascetic, nor Tolstoïic, simply rhythmical."

M., 38. A physician,—"It is a moral certainty that much the larger half of our boys and girls learn the habit of masturbation, and when once learned it is practically impossible to stop it before adult life. So the most that can be done in the meantime, is to keep them busy, teach self-control, withhold all stimulating foods, drinks, exciting entertainments, lewd pictures, all suggestive reading and mental imagery."

M., 26. University fellow and missionary,—"Daily cold bath, bathing organs, back and groin with cold water after warm bath, avoidance of constipation and over exhaustion of the nervous system, exercise, mental occupation and control of attention and refusal to worry about what may happen in the night when the will is inactive have helped me. I have established the habit of awakening and getting up when impure thoughts arise and this has greatly helped me. I have learned these things after long and painful experience. I wish I

might have been told some of them when a boy and thus have avoided many mistakes and worry."

Relation of Environment and Mental States to Health.

The papers are practically unanimous in saying that health is largely dependent upon environment and the mental states. Four only speak negatively and state they have known persons having the best of environment with much ill-health and *vice versa*. Their statements, however, only prove and emphasize the general rule.

The following are a few of the characteristic expressions: "My mental states and consequently my health are largely influenced by my surroundings;" "bad surroundings produce a morbidness in me and so act upon my health;" "when under mental strain I do not feel well;" "a morbid mind should have a bright environment;" "my mental states and my health are largely controlled by my environment;" "cheerful surroundings make a cheerful mind and this the health.

F., 21. "I get the blues when externals are not right. My appetite fails me, my body is depressed, I can only tone up by joining a crowd of jolly girls. This I do whenever the blues appear."

F., 21. "I credit much of my good health to a very cheerful home atmosphere. Ten years ago I determined to make the whole family laugh during every meal. I have not fully lived up to this resolution but still our meal times usually are jolly times."

The Ideal Life.

The answers to this, the final question of the questionnaire "keeping well" is, in a measure, a general summary of much that has been given under the leading topics considered. In sketching an ideal life many of the writers have placed much emphasis on food, clothing, sleep, work, exercise, recreation, home, friends and health.

Food. The food is to be plain, nutritious, country-fare, well-cooked, wholesome and easily digested. Little mention is made of meat; sweets and much pastry are to be avoided; fruit and vegetables are to find a prominent place in the dietary. There is to be plenty of food, but eaten in moderation.

Clothing. Rich and costly apparel is not desired. The characteristic qualifying terms are "neat," "warm," "comfortable," "clean." The clothing is to be selected with great taste; is to be worn loose but well fitting.

Sleep. Many express a desire for more sleep and rest. "More sleep," "restful sleep," "sleep as much as I want," "get up when I feel like doing so" are phrases often used. None make mention of less than eight hours, the majority more. The average amount would not be far from nine hours;

the time from 9 P. M. to 6 A. M., or 10 to 6 or 10 to 7. The hot bath is frequently spoken of for the bed time; the cold bath on getting up.

Work. None want an inactive life. Some do not speak of any specific kind of work; the majority do. Though no mention is made of wanting to get away from work and responsibility, it is evident that many feel that they are overworked. There is manifest a decided tendency to worry. Many crave a moderate amount of congenial employment, work in which they might become permanently interested and not be drudgery to them. More freedom is desired. They wish to be in circumstances where they will not be compelled to work when physically or mentally unfit. Many express themselves as not having time for meals, sleep, exercise and recreation. They ask only for a reasonable amount of time for these necessities. Some want to do all mental work; most desire physical and mental. Morning is the time for work; afternoon for exercise and recreation; evening for reading, music, friends and society. The spirit of the papers is that one should work six hours a day exclusive of reading.

Exercise. No part of the ideal life is dwelt upon more than exercise except health. This is due to the fact of work consuming time which should be devoted to exercise and recreation and because intelligent people clearly see the relations of playful effort and mental relaxation to health. Eat one must, if ever so fast; sleep one must, even though the period be cut short, but exercise and recreation can be set aside without immediate ill effects. Here, too, only the free, open air exercises are emphasized. Apparatus, formal exercise as physical culture and the gymnasium have no place. Plays, games, brisk walks, strolls, riding, driving, swimming, skating, rowing, tennis and dancing are often mentioned.

Recreation. Travel has first place. Then follow reading, theatre, music, games and social pleasures. Great desire is expressed for freedom in recreation; occasionally leading a sort of gypsy-life, abandon, let-down, a mere vegetable existence,—the joys that spring from hedging one's self about, dressing as he chooses, eating and doing just as he pleases, a life totally in the privacy of the self, enjoyment of a secluded wallow with no eye to stare at, no tongue to tell, the primitive savage-hour,—a total relief from work, worry and care, an evening-up process.

Home. Many speak of the home and homestead. All desire that the home (house) shall be large and old, rich in associations and memory, in an open, airy, roomy place not far from the city, but near to the mountains, ocean, lake, river, woods and meadows, with large expanse of lawn, studded with trees. Here many evenings are to be spent in quiet, with the

family or in reading. Now and then congenial friends are to come. There shall be an occasional dinner party and a trip into the city to theatre, concert or lecture.

Friends. Some want but few friends, these to be wholly congenial. Others will be satisfied only with a host of friends. Some wish their friends to visit them occasionally. Others desire them to come often. One young woman says, "If I could only have all the dinner parties for my friends I desire, this would be my ideal life." Here it may be mentioned that many express a wish for wealth, not for their own selfish ends but that they might be at liberty to do good in the world; care for friends, provide for father and mother, help the poor, go into the slums, relieve the sick, sad and distressed.

Health. In the ideal life, health is the one desideratum. Compared with the wish for real, abiding health, every other is pale. Here again overwork, worry, ailment, lack of proper food, sufficient amount of sleep, exercise and leisure thrust the topic of health into the foreground. We shall best catch the spirit of the desire for health from a few of the typical statements: "To feel well all the year round and always be happy;" "no distractions of mind, no worry;" "heart and spirit for life;" "to die before I fail to live;" "no depressions, nothing to mar;" "not over-work, but work when I feel like it;" "sound mind and body with power of accommodation;" "complete relaxation once a day;" "only to be strong and well;" "regularity in health;" "a healthy life not an artificial one."

F., 18. "My ideal life would be a life in which a person can without much precaution and safe-guarding keep perfectly well, never be bothered by headaches, backaches, colds and sleeplessness, feel rested after sleeping and be able to sleep after a day's work, eat and drink what one likes."

F., 24. "If my sole aim were to keep at the very top of my condition and live as long as possible, I should want to sleep eight or more hours every night, in the morning feel rested and ready for the day's work, have time for much exercise and fresh air, have a certain time for everything, be free from all worry, discontent and jealousy."

M., 33. "I look at health as a matter of wholeness, completeness and therefore the highest end of life. To be healthy and strong is to be wise, because only strong men and women are able to do the work and live the life they should. To teach men and women and our youths so they will know themselves and definitely find out just how they can get the most work out of themselves with the greatest economy is the greatest teaching it seems to me. How this can best be done, I cannot even make a guess."

II.

MEDICINE AND QUACKERY.

The prevalence of advertising doctors and quackery, of morbid fear of disease, the strong tendency to resort to medi-

cine for health, especially to "patents" as "cure-alls," have prompted the following investigations among druggists and physicians.

The request, "Mention any kind of medicine which you have used," of the questionnaire "Keeping Well" has called forth many such answers as the following, which is from a female teacher of twenty, who fears dyspepsia.

"I have taken many prescriptions from doctors, Hood's Sarsaparilla, Peruna, Ayer's Cherry Pectoral, Radway's Ready Relief, Thomas' Pine Tree Tar, Scott's Emulsion, Little Liver Pills, Garfield Tea, Brown's Laxative, Cascarets, Pepto Mangan, Ripan's Tablets, Lady Webster's Pills, Frog-in-the-Throat, codliver oil, ipecac, quinine, calomel, digitalis, nitre, magnesia, peppermint, soda tablets, balsam apple and whiskey, hot whiskey and lemon, soda mints, menthol tablets, and have used various plasters, salves, ointments, creams and poultices."

The following questionnaire was submitted to druggists:

1. Have patent medicines any merit?
2. If not, what sells them?
   (a) Is it because they are regarded cheap?
   (b) Lack of faith in the regular practitioner?
   (c) Or because of advertising?
3. Who buy patent medicine?
   (a) The ignorant, or intelligent; the poor or the rich?
   (b) Which sex buys the more?
   (c) At what period of life principally?
4. What "patents" are largely bought? for what ailments?
5. Do physicians make use of patent medicines?
6. What is your estimate of the work of the average physician?
7. What do you know of the advertising doctor and quack?
8. What is your opinion of the drug business as it is conducted to-day?
9. Do people take too much or too little medicine?
10. How are the people to attain unto a greater degree of health?

I have made personal visits to thirty-five druggists, wholesale and retail, doing business in towns and cities in the eastern and middle sections of the United States. The proprietors themselves were sought,—men who have been in business from ten to forty-five years, the average length of service being twenty-five years. The suburban and the down-town druggists, those doing business in the richer districts as well as those in the poorer quarters were visited. All cheerfully answered the questionnaire and often entered into confidential conversation, only requesting that their names be not given to the public, as their business is their "bread and butter." I have also interviewed a number of reputable physicians, several pharmaceu-

tical chemists, and consulted advertising doctors and travelling quacks.

Have patent medicines any merit? The majority of the druggists answered in about these words, "They absolutely have no merit." Some said, "They not only have no merit, but are positively harmful." A few said, "Whatever good they possess lies in the alcohol they contain." I failed to find a druggist that regards patent medicines as having merit. "It's the biggest fake in America," was an oft-used expression. Two did say if there be an occasional patent that has any merit, it is some old and well-known remedy put up in new form, colored, and flavored to conceal the ingredients and sold under a strange or attractive name at a ten-fold price.

Druggists fear the secrecy of patent medicine. They frequently spoke of the large amount of alcohol, cocaine, opium or morphine patents are likely to contain; one never knows what he is taking. A druggist old in the profession said, "The best clerk I ever had took from my shelves a patent medicine for catarrh. It contained cocaine and ruined his life." I have found a few expensive, harmless "patents," one being nearly pure glucose, which sells for one dollar a bottle and can be put up for five cents; others, largely colored and flavored water. There is one of water and containing a trace of hydrochloric acid, hundreds of thousands of bottles of it are being sold, much of which if taken will ruin the enamel of the teeth and eat the lining of the stomach, yet many testify to its merits and several times I have been asked by intelligent people if it is not a really good medicine. Nearly all druggists have sold it and say they never had so great a seller nor handled so great a fake. There is a harmless flavored decoction of oats, widely sold under the name of the supposed discoverer of this great tonic and purported builder of nerves.

The Massachusetts Board of Health has found 41.6% of alcohol in a medicine advertised as "A purely vegetable extract" and as a "great help to inebriates struggling to reform." This Board says of a certain essence, "A more insidious and dangerous fraud can scarcely be imagined, especially when administered as this is recommended for the cure of inebriety or the opium habit." The Western druggist says of the same essence, "It is widely advertised as a wonderful nerve tonic, containing neither alcohol nor harmful ingredients, but is, in fact, loaded with 35% of alcohol and two grains of morphine to each bottle. A more diabolical concoction could hardly be devised."

Since methyl or wood alcohol has been deodorized it is often the chief menstruum for patent medicines. In 1902, the Board of Health of New York city found 40 out of 215 drug stores

substituting wood for grain alcohol in their pharmaceutical compounding. Paregoric, liniments, spirits of ammonia, Jamaica ginger, spirits of camphor, bay rum, witch hazel, colognes, the culinary essences, cheap whisky, many medicines and foods contain much wood alcohol. Dr. Warren, the pure food commissioner of Pa., found 95% of the samples of whisky containing it, some of them as much as 75%. Twenty-five persons died of drinking whisky containing it last year, in a certain district in New York city. Wood alcohol is but one-fifth as expensive as grain alcohol, which accounts for its large use.

It is not known by the laity, indeed by the medical profession at large, how dangerous is the use of wood alcohol. About 50% of the people are susceptible to its evil influences, depending upon the state of the stomach, nerves and general health. Some are so susceptible that inhaling it, or bathing any part of the body with it poisons. Up to 1904 Drs. Buller and Wood reported 153 cases of blindness and 122 deaths from its use. These doctors, who have made a careful study of wood alcohol and its evils, say, "Certainly few members of the medical profession and practically no one of the general public, are as yet aware that methyl alcohol taken into the system in moderate or considerable quantity not infrequently causes death. More than this, the people are still less cognizant of the fact that a certain proportion of those who survive the poisonous effect of the drug are condemned ever afterward to the miseries of greatly impaired vision, and, indeed, not infrequently to absolute blindness." The report of the investigations of these physicians states, "There is hardly a liniment, an essence, an extract, or a bitters—hardly any nostrum or concoction, medical or domestic, in whose preparation alcohol is employed, that has not been or is not now, adulterated with this poison. We have within the past few months had several proprietary remedies, suspected to have produced blindness, carefully analyzed; they all contained wood alcohol."

There is the patent medicine "X" which has had enormous sales for many years through extensive, persistent and unique advertisment. The druggists insist that it has no merit but the bad gin it contains. "Our women," said a druggist, "have no scruples in taking this impure stuff under the guise of medicine. It is no good, and yet I had to order seven gross of it this morning." Another said, "I have been selling it for upwards of thirty years. I have sold it to hundreds of women, a dozen bottles or more to some, and I do not know a person it has helped in the least."

There is preparation "Y" whose sale is pushed to-day by active agents in every city and town in the United States and

vast sums of money are being taken from the people, for it is an expensive and long drawn out treatment. According to the Western druggist this preparation is "a mixture of tannin, opium and cocoa butter put up in capsules and sold for a cure of all female diseases." Its manufacturers, one of them with "M. D." following his name, have published a large book, written in popular style, containing just enough science to deceive the public at large. Here, too, it is just that "scientific pose" now so largely made use of by quacks the more readily to deceive the great, credulous mass. Thirty or forty years ago, the patent medicines usually were wonderful discoveries made among the Indians, strange peoples in far distant lands. Now eminent scientists discover them after years of experimentation in the laboratories. Just so with "Y." I have known some people of irregular habits who said they were benefited by a six months' "course" of "Y," but their improvement came from their faith, and particularly the regimen, as prescribed, dietetics, rest, recreation, and exercise, and especially the systematic rubbing and massaging, which commonsense, and every-day hygiene insist upon free of charge.

There is "Z," said to be a college woman, and possessed of dramatic personality, who has little trouble in inducing women by the thousands to use her fifty specifics, which range as preventives and cures from freckles and pimples to consumption and Bright's disease. Here is a bit of her advertising:

"It is a specific for every weakness to which woman is peculiarly susceptible from infancy to old age. It is an elixir of life at every stage of her earthly journey. It annihilates pain, banishes suffering, brings health, hope and ambition to all. It makes the sick well, the weak robust and the strong stronger. It is invincible. It is woman's long-sought, never-failing panacea."

"Z" makes a face lotion which is retailed at $1.50 for near a half ounce. As good an article, possibly better, can be made for from five to eight cents.

The investigations show that three-fourths of the people buy patent medicines, more or less, and believe they are getting efficient medical services "at a bargain." "My store," said a druggist, "is crowded with women when I give away sample medicines or cut prices. They are anxious to buy and take any medicine if it can be bought at a reduced price." The Indiana pharmacist urges druggists to make their own "patents," saying, "Why pay $1.90 a doz. bottles for a cough syrup, when a better article containing no opium can be made for 46 cents a doz.? Why pay $8.00 for bitters when a better can be made for $2.25? Why pay $8.50 for a blood purifier generally made up of a solution of epsom salts, colored and flavored, when a really good thing can be made for $3.13 per doz. bottles? Why

should not one make up his own kidney remedy at a cost of $1.77 a doz. bottles and thus afford a much better profit than W's nostrums and do the patient some good?" "Here is a medicine," said a druggist to me, "that sells for $1.50 a bottle. I have made a superior article for 18 cents a bottle and sold it at 35 cents, making nearly a profit of 100%."

All evidence from druggists, chemists, physicians and medical journals amasses itself to prove that patent medicines are costly and dangerous to body, mind, life and morals and that their producers are deceivers and robbers.

What sells patent medicines? There was but one answer given by all druggists visited. "Patent medicines are sold wholly through the susceptibility of the people to advertisements." There is some lack of faith in the physician due to his incompetency, carelessness, failures and neglect of the poor, preferring to administer in more attractive quarters and particularly where his fees are sure and not long delayed. The element of expense, too, is considered. There are those who will pay twenty-five cents for tablets or a dollar for a bottle of medicine which will last ten days rather than pay for a prescription and its filling or one to three dollars for a visit from a physician. Then many women fear the publicity of going to a physician, and long delay a visit to him if they suspect an examination is necessary. So when a new medicine is cunningly advertised as curing upwards of half a hundred ailments and costing but one dollar a bottle, many are induced to buy. A Chinaman in "As a Chinaman Saw us," says, "No one profession demonstrates the abject credulity of the great mass of Americans as that of medicine. In no land under the sun are there so many ignorant, blatant fakirs preying on the people. They are so easily led that the most impossible person if he be a good talker can, by the use of money and audacity, secure a following to drink his salt-water, paying a dollar a bottle for it and singing his praises."

It is necessary to work incessantly upon the credulity and fears of the people through advertising to sell patent medicine. The average life of a "patent" is three years. It will run its course and die unless heavily advertised. Some firms have spent annually a million dollars to keep up their sales. There is a bitters, made years ago in a prohibition State to evade the laws, which has had a long life without extensive advertising, but this has been due to the 44.3% of alcohol it contains. Recently a successful druggist said to me, "If you want to get rich quickly, take five thousand dollars with a little business sense and push and through judicious advertising of a nostrum ring the most significant changes on F-E-A-R. The people are so fearful of disease and believe so much in medicine

that one can induce them to buy any manner of preparation. It is no trouble to get their money if you know how to play upon their little ailments and trifling indispositions."

"Many people have the medicine habit and it is about the worst habit I know," said an old druggist. "Patent medicine," he continued, "is an unadulterated humbug." I said, "You are to-day making special display of blood purifier and catarrh cure in your windows and have big advertisements in the morning papers." "Well, what are we to do," he said, "people will buy medicine. I have told many a one that he did not need it, only to have him go elsewhere and buy."

Often a week's daily advertising of a medicine will bring enormous sales. Not long ago, advertising sold sixty thousand bottles of a certain "patent" in a western city in a few weeks and the medicine did not contain a single ingredient as advertised. The business manager of a large daily, awhile since told a druggist to get ready for large sales on a "patent" as the paper had begun a series of flaming advertisements. "And sure enough," the druggist remarked, "the sales soon began and have been enormous." Let but a board of health or a physician announce that a few germs of a disease have been found and a rush is made for medicine.

It is fear and the reading of ourselves into advertisements that sell patent medicine. A physician related that in a class of sixty medical students attending a clinic on heart trouble, twenty-five of the students had fears of heart weakness and privately consulted the demonstrator after the clinic. Examination showed not a single case of serious trouble. Many a student out of extreme susceptibility is forced to abandon a medical career. History is full of epidemics of suggestibility,—panics at fires, financial panics, mobs, intense fear during plagues; pilgrimages, the Crusades, the Flagellant and Dancing manias, witchcraft, tulipomania, Mississippi Scheme, South Sea Bubble; the Woman's Crusade in 1873, the sweeping religious revivals from time to time, Millerism and the like. All have sprung from our susceptibility to rumor, report and fear; the spirit of imitation and the strong tendency to move en masse. A man of 28 writes, "The patent medicine man recognizes the influence of mind upon body. For a person afflicted in any way to be eternally brought face to face with his afflictions and in an environment always crossing the bridge before getting to it naturally aggravates his disease." It is easy to read one's self into the ailments vividly described in the advertisement of a medicine. This done, he is well on the road to buying and taking. Disease is mentally catching. Last year a community had liver trouble; this year it is stomach; next year something else. "Did you say," I said to a druggist, "that your

city has kidney trouble this season?" "No," he replied, "I said, kidney suggestion." "Due to what?" I asked. "To the advertisement of Swamp Root and the testimony of two or three men who think Swamp Root is helping them."

The name of a medicine helps or hinders its sale, and care is bestowed in its selection. The name must be short, easily catching the eye and remembered; euphonious, onomatopoetic, alliterative; bizarre, having something of the Indian or oriental cult about it, which haunts, lays hold and will not let go; suggestive of relief, cure, hope and be apparently scientific. The following will illustrate the psychological and rhetorical principle in selecting patent medicine names: "Pink Pills for Pale People," "Radway's Ready Relief," "Vegetine," "Vinol," "Viavi," "Terraline," "Kaskine," "Kodol," "Bardoma," "Comatone," "Nervura," "Hyomei," "Matico," "Pascola," "Oakolo," "Peptiron," "Hepa-Rena," "Omega," "St. Jacob's Oil," "Good Samaritan Liniment," "Balm of Gilead," "Bloom of Youth," "Old Doctor Wessen's Angel of Peace and Solace of Life." Take the last named: The word "doctor" to many is talismanic; "old doctor" is more so; "Wessen" is rhythmic, euphonious and easily pronounced. So the phrase "Old Doctor Wessen" is an attractive one and when joined to "Angel of Peace and Solace of Life," the title, is interesting, suggestive, sympathetic, already healing or soothing to those who feel driven to medicine of some sort.

There is absolutely no dependence to be placed in the testimony of the merits of patent medicine, notwithstanding that some very good people conscientiously testify. When the matter is traced down the testimony is due to ignorance, faith, temporary exhilaration from the gin or stimulating drug in the mixture; then many people are greatly pleased to have their words and pictures before the public; others easily commend through a gift of half a dozen bottles and not infrequently people of some little rank and office testify through the offer of a good, big sum of money. The manufacturers often say, "We have the *bona fide* testimonials. Any one disbelieving call and examine for themselves." No one needs to doubt these words. It matters not whether the makers of patent medicine have or have not the "original" testimonials. The matter stands unchanged.

Who buy patent medicine? The sales, by no means, are confined to the poor and ignorant. The rich and intelligent buy much. "All classes buy of me, the rich as well as the poor." "It is surprising how many rich buy patent medicine." "All take it, the poor, the rich, the ignorant and the most intelligent." "All classes buy from me, but the ignorant and poor and middle classes buy most." "The ministers of the city are

among my best patent medicine customers." "The educated and reading public buy most of me for they read the newspapers." "The laboring classes buy most." "Those who have most money buy least." "The country is best for my patent medicine trade. The country people have leisure to dwell upon the patent medicine advertisements." "A rich and successful business man has paid me $85.00 the past two years for patent medicine."

Which sex buys the more? The evidence is conclusive that women buy more patent medicine, more medicine of all kinds, than men. However, the sales are not confined to the one sex. I have found men upwards of seventy trying "to renew youth" by taking a "highly advertised patent." Six druggists report that at least 75% of all patent medicine is taken by women. "Women buy most patent medicine. They are more easily influenced by what they read. They want, too, the novel, striking, love change and are so gullible." "Women, by far, buy the most. They believe what they read and love experiment." "Women are more diseased, more credulous. It is harder to induce men." "Men come to me to buy patent medicine largely for venereal diseases." "Women buy the more for they pore over advertisements, while their husbands read the news." In an hour's interview with a druggist four men bought "patents" for venereal disorders. However, in my visits to drug stores I counted five women to a man buying medicine.

Woman is more susceptible to impressions than man; is more imaginative, is proner to exaggerate her ailments; reads her complaints into advertisements. Our manners and customs have made her weaker. She is housed up, takes little out-door exercise and broods over her indispositions. Then, too, through lack of money she is obliged often to resort to cheap medical service and patent medicine. Then, too, as already said, she dislikes the publicity of going to a physician and recoils from personal examination.

At what period of life is patent medicine used principally? Parents dose even their infants and children with it. Young women in the teens frequently use great quantities for menstrual irregularities and young men for the evils of masturbation. But the real patent medicine period sets in about 28 or 30 and lasts until 55, or more particularly the period extends from 40 to 50, or during middle life. Approaching 40, hereditary taints, earlier indiscretions, over exertion of mind or body appear. Kidney trouble in men, nervousness and the climacteric in women and sexual derangements in both. By 40 many have reached their highest efficiency. An effort is made to sustain their failing vigor and restore what now they are becoming

conscious of as lost. "The medicine period is over 40 yrs. rather than under." "About 45." "From 35 to 50." "I sell masturbation remedies from 20 to 30, but the ordinary patent medicines are sold in middle life to old age." "I sell most to men and women about 40, for it is then they begin to fail." "I sell Lydia Pinkham to those who are from 16 to 40; the various patents for Bright's disease from 40 to 55."

What medicines are largely bought and for what ailments? Coughs, colds, consumption, the blood, kidneys, masturbation, venereal troubles, nervous affections, female complaints, catarrh, liver and stomach, general systemic debility seek relief in patent medicine. As to the medicine taken much depends upon the efficiency of the advertising. Then medicines have their "day," season and style. They come and go as marbles, rope-skipping and other children's games. Then there are waves of influenzas, a "bacillus scare," the appearance of an "officed" or street haranguing quack, who is on the alert for the tendon Achilles of society and knows the vulnerability of man.

Do physicians make use of patent medicine? One-third of the druggists visited stated that the physicians that deal with them make more or less use of patent medicine. All, however, emphasized the fact that the majority rely almost wholly upon the pharmaceutical compounds. Six druggists said physicians buy "patents" of them, change the label, or put the medicine into their own bottles under their labels. "Here," said one, "are half a dozen bottles whose wrappers have been broken by physicians." "Step here," said another, "if you doubt that physicians are giving patent medicines." I did so and found several bottles at the back of the shelf, whose contents, —blood purifier, tonics and kidney remedies, had been partly taken out. A druggist handed me two bottles saying, "A physician has taken a part of these, has paid me for all and is at liberty to come and get the remainder." "Physicians buy patents of me and give them to their patients as their own preparations." It may be said that the physician generally frowns heavily upon "patents," compounds little himself or has his druggist do it, but resorts to the compounds sent out by the pharmaceutical houses. A number of druggists bring this charge,—Physicians are mere dispensers, they neither know what they give, nor the properties and effects of the medicines they administer. One doing a thriving wholesale and retail business stated, "Yes, physicians give patent medicine and know very little of the pharmaceutical compounds, which are close kin to patents, and in many cases just as bad. They are often kept secret and are not true to formula, as my chemists have shown from time to time. The physician fre-

quently does not know what he is giving. It is not infrequently hit and miss with him as in diagnosing diseases. Physicians are as gullible as the laity. A live up-to-date agent of a compounding house can sell them most anything, as our full shelves of this sort of stuff show. These agents are constantly offering something new and changing their compounds in the face of the fact that there are but six or seven, at most ten medicines whose properties and their effects on the body are known." A number of druggists expressed the same opinion of the proprietary compounds, strongly emphasizing that they are not always true to formula, or the formula is not complete. Several stated that too many physicians are influenced by the agents sent out by the pharmaceutical firms. It appears that as the commencement season of the medical institution approaches many agents settle down near by and the young doctors "are promised," and often receive a well-filled medicine case of samples. However, it should not be forgotten in considering the attitude of the druggists toward the compounding houses, that the former have been deprived of their art and profits by the latter and a friendly feeling could hardly be expected to exist.

What is your estimate of the work of the average physician? According to the druggists the average physician is incompetent, neither knows disease nor medicine; neither the science nor the art of his so-called profession; has little interest in his work other than a commercial one; will stoop to any practice for money and the drug business is being constantly lowered by his demands. Here again Veresaeff's estimate of the physician is recalled. "There are shoals of excellent theorists and genuinely scientific medical men who are not worth a brass farthing in actual practice. There are as few real physicians in the world as there are poets. The ordinary human doctor is an absurdity." A pharmaceutical chemist said, "There are not six physicians of the two hundred and fifty in this city into whose care I should be willing to entrust my health or that of any member of my family." "Our doctors," remarked a druggist, "cannot tell smallpox from scarlet fever and measles. This has been demonstrated here within a month. They are an incompetent set." A pharmacist remarked, "A few days since a physician, doctoring in the best part of this city, sent to me four different prescriptions, each containing a deadly poison, all to be given to a little girl one morning. I telephoned him asking if he knew what he had done. He replied that he had got mixed up and did not know that he was prescribing so much poison." Billroth says, "Our progress is over mountains of corpses;" Magendi states, "Medical science has been enriched chiefly through its losses;" Veresaeff,

"How many ruined lives lie in the wake of every doctor! In this terrible science of ours it is impossible to step without stumbling against living man. In venerology crime stains every step made by the science."

There are those who think the therapeutical art has improved little over that of Hippocrates and Galen, at least its progress has not been commensurate with the other sciences and arts, has not kept pace with anatomy and physiology. It ought not to be overlooked that disease has grown complex with civilization. Climate, peoples, manners and customs have changed. We are no longer simply Grecian or Roman, but cosmopolitan and so, in a sense, our diseases. With the evolution of the race in its varied civilizations, we shall expect new and complicated disease forms to arise. It is believed, however, that the medical profession is weak on the side of mental therapeutics. By this is not meant exactly mind cure, faith healing and the like, but scientific mental law applied in the healing art. All great physicians, from Hippocrates down, have made practical use of it. The following statement from a man of forty-one illustrates what is meant: "When sixteen I got the notion I should die of consumption within a few years. I became despondent. My mind was constantly on my breast and lungs. I lay awake night after night with the words 'die of consumption' ringing in my ears. There came to be a heaviness, a sluggishness, a sort of deadness in my breast. One day the family physician, a jolly, common-sense man called. 'What 's the matter, John?' he asked. 'Nothing,' I replied. 'Yes, there is,' he said, laughing. 'The day is fine, I 've a little spare time, let 's go for a walk.' This wholesome invitation raised my spirits. He somehow got a hold on me and I unbosomed my secret fears. Whereupon he said, 'See here, I 've lived long enough to know there 's no consumption ailing you. It 's all in your mind, get it out. You are not extremely wide chested but your chest (unbuttoning my vest) is deeper than the average and has good form and these are important. So just throw your consumption away.' I did so, and from that moment the load was lifted and I soon felt a newness in life, and have never had any lung trouble. Yet had I gone on in my obsessional mood, I should never have reached my majority."

Dr. Putnam says, "We can hardly treat a patient, no matter with what he may be suffering, without having to reckon on the vast and complex part which his mental attitude will play in controlling the result. In many instances, indeed, the physician's success depends upon the skill with which he makes this estimate. Yet how rarely is it systematically and consciously made under the guidance of a definite principle

and how gladly would most physicians crowd out of sight the necessity of making it at all." It is not expected that a science will make use of amulets and the "good breath" of the Turkish hadja, but all such means employed in curing disease are worthy of study by the honest, sincere physician, as touching as yet an unexplored region in human nature.

Rabelais realized the influence of story and conversation in therapeutical art. A year and a half after graduating in medicine from the University of Montpelier he published his "Chroniques Guargantuine," which, notwithstanding his fine anatomical demonstrations, and work on the circulation of the blood, which, indirectly at least, stimulated Harvey to his epoch-making discovery in the next century, proved to be of the greatest importance for personal hygiene and health. He wrote concerning his book "My mind is able to choose no other theme seeing the sorrow which undermines and consumes you." He stated he had not written for glory but "to cheer and comfort men and remove them from their afflictions." Rabelais's wit, laugh and ludicrous stories, here and there too coarse for our time, were for him and his day, monk and priest as he was, of far more practical value in alleviating the sorrows and sickness of humanity than prayers, fasts, vigils and sermons. He recognized that fear and worry are the world's great maladies, and in all his works we find him preaching a new evangel: "Live happily and be ye well."

What do you know of the advertising doctor and the quack? Many a physician through his science and practice having come to know the weaker side of humanity, and desirous of making money faster than the opportunities of the profession allow, resorts to advertising or making nostrums. I know a physician who, a few years ago, was doing a good work in a small town, is to-day advertising and making a "patent" in a city. A druggist says a travelling physician comes to his city and carries away from $4,000 to $10,000 twice a year, while the best established practitioner does well to make $4,000 a year. Another said that he had a classmate who left the profession after two years to write endorsements and advertisements for a patent medicine firm at a salary of $12,000, and has been with the firm twenty years, and yet recently said he would not give a bottle of champagne for all the medicine they manufacture. A pharmacist told me of a medical friend who had a fine practice and good income, but went into "lost manhood" advertising and is now making $40,000 a year from a western city and is establishing three branch offices in other cities. Champ S. Andrews, counsel for the New York Medical Society, says: "I am reliably informed that an institution advertising 'men's diseases only' made over $200,000 in 1904.

In some cases patients were frightened into thinking they had loathsome diseases and paid a fee as high as $2,000 for a few treatments. I know several such instances." A druggist said to me, "You would be greatly surprised to know how many people go to the travelling physician, paying as much as $100.00, for a little treatment." Another reports that a certain travelling specialist is giving the women who flock to him for treatment little else than morphine. A man of 40 writes me: "I feared sexual weakness. I read the cures of an 'advertiser.' I wrote him and he encouraged me to take treatment. I did, paying him $50.00 down. Little later I paid him $50.00 more. This while I was teaching school at $25.00 a month, and I did not get a copper's benefit." Another writes, "I paid a widely advertising company $75.00 and received absolutely nothing in return." I was lately in a college town where a firm advertising "for men only" had sent seventy-five cases of medicine C. O. D. to college young men. Only a few took the medicine from the express company. The firm was notified, but left the medicine with the express company which threw it out. The names of the students had doubtless been taken from the college catalogue.

All evidence goes to show that the advertising doctor is flourishing and is steadily on the increase. Physicians state that comparatively few men having private diseases come to them. More resort to the druggist, but the majority seek assistance of the travelling doctor and 'advertiser,' who are successful in playing upon the whole gamut of fears and succeed in robbing thousands who have no sex ailments. The newspapers are accomplices in all this nefarious work. Recently one of the leading dailies had six full columns on one page, besides the scattered notices, devoted to doctors advertising 'lost manhood cures.' The Medical News of New York City says, "The modern charlatan could not exist without publicity given his advertisements by the press. If our New York papers would refuse advertisements for the sale of drugs for a criminal purpose, illegal lying-in establishments and the distressing advertisements for the sale of the so-called specialists for diseases of men only, it would not be difficult to rid the community of the chief offenders. These vicious advertising charlatans draw their recruits from innocent victims attracted by the advertisements unblushingly received by many New York papers."

Some years ago a blatant quack, but a genius for getting the confidence of the people, came into the town where the writer was principal of schools. Two weeks before his coming he advertised as follows through large posters. "The wonder mind healer and health restorer, Dr. ——, will visit your town. It is seldom I stop at so small a place, but I am on my way to

the city. I only invite sick people to call upon me. I have no time to spend upon the well. I feel it my mission to relieve the suffering. The worst cases of all diseases shortly and permanently cured. Let there be no delay in calling upon me as soon as I reach your town.'' And there was no delay. It seemed as if three-fourths of the people were convinced of serious illness before he left. He 'read their heads' that he might be able the better to diagnose ailments. He had the faculty to tell every one, whose head he examined, just what the patient delighted to hear. He astonished the country people with his great glass percolator, a big funnel standing four feet high, stuffed with chopped-up clover, catnip and hoarhound, slowly dripping out the dense-black cure-all. The sight of the wonderful instrument and its product was well-nigh sufficient to cure the onlooker. He sold the medicine 'in the dry' for twenty-five cents a package, or one dollar a bottle in liquid form, triple strength from the percolator. Most took the 'triple strength.' He also had an ointment that 'induced great sexual strength.' There were two grades of this: No. 1, was five dollars, No. 2, double strength and never-failing, ten dollars. Many took the 'double strength.' This ointment when analyzed was found to be vaseline with a trace of carbolic acid. The 'double strength' had a little more of the carbolic acid in it.

What is your opinion of the drug business as it is conducted to-day? Of the thirty-five druggists interviewed not one is satisfied with the business and not infrequently distaste and contempt were expressed for it. The older druggists say the business is no longer so clean nor professional as it used to be. The younger men have expected to find the work more scientific and remunerative and are disappointed in both. The pharmaceutical firms are doing much of the compounding and the druggist is deprived of his science and art as well as of profits. All complain that the work is largely that of mere clerking, selling patent medicines, standing at the nod and beck of the physician and having few professional opportunities. Then many have come to feel that much of the drug business bears an immoral stamp. To live at all, some evade the liquor law, advocate the taking of much medicine, when they have but little faith in drugs. Many remarked disparagingly on the great number of calls for preventives of conception from all classes, young and old, married and single. I was shown not fewer than six mechanical appliances for the prevention of conception, to say nothing of the great variety of pills, tablets and liquids for this purpose, on the market. Women send their servants or go themselves and purchase these preventives

and do so unblushingly, All this the honest druggist frowns upon, but says the people and physicians force it on him.

Do people take too much or too little medicine? There was but one answer, "Too much medicine is taken." Many people are slaves to medicine. It was strongly emphasized that the people believe far more in the efficacy of medicine than druggist or physician. It was pointed out that many are ill because of the amount of medicine taken. It is evident that the best physicians do not drug their patients. It is only the mediocre doctor, the druggist, advertiser, quack and patent medicine manufacturer that insists on administering much medicine, the first often out of ignorance or to satisfy the whims of the patient, the others for profit.

How are the people to attain unto a greater degree of health? The following statements were invariably called out by the question: Take medicine only when needed and then never patent, but only under the prescription of the most competent physician. To be healthy, be moral, temperate and regular in sex habits. Eat less and plainer food. Exercise much in the open air. Occupy the mind with hard work, for systematic work never kills. It is the irregularities, the excesses and immoralities that do this.

III.

THE EMOTIONS AND HEALTH.

Pain and Pleasure. Pain arises from the organism's attempt to adjust itself to new environment. It ceases when the adjustment has been made. If the adjustment cannot be made, pain preys upon the vitality of the organism and when this has been consumed ends in death. Pleasures are heightened in contrast with pain. The hero never wearies of recounting great battles fought. Biologically through the principle of the survival of the fittest, pain has, in a sense, made what health we possess. There are not wanting those who advocate a more intense life-struggle in the interests of a sturdier race. Veresaeff sees racial danger in the triumphs of modern surgery and medicine: "Woman with narrow hips cannot give birth to her child. Surgery steps in and saves her and her child and thus the narrowing is perpetuated. The higher the infantile death rate, which medicine so energetically combats, the more surely is the next generation purged of all weakly and sickly organisms. Every new success of medicine will accelerate the progress of deterioration." H. M. Stanley says, "It is only by intense struggle that those new psychic forms are initiated and developed which are of the utmost service to the organism."

Stanley further states, "Though function is generated and developed by severest, painfulest struggle, yet reward is pleasurability of the free functional activity; and the more manifold the functioning built up, the more manifold the pleasure." H. R. Marshall says, "The elimination of pain implies loss of all pleasure capacity. Theoretically, then, it appears that the elimination of pain would imply the elimination of pleasure also and the destruction of psychic life; that is the reduction of consciousness to pure indifference, which, accurately speaking, is no consciousness at all." Lotze says, "We can choose only the one or the other,—either the simple, monotonous harmony of an uneventful life according to nature or the full articulated melody of civilization, gradually unfolding through many a discord."

Pain, doubtless, has been a great factor in the evolution of the race, weeding out the weak and making the strong stronger; a powerful deterrent and monitor negatively pointing out the lines of development and by contrast heightening the pleasurable feelings and therefore has been very instrumental in building up the pleasure-capacity. But is pain more fundamental than pleasure? Is not pleasure the more fundamental affection? Is not the evolutionary process an expansive movement? Is not pleasure the characteristic affective element in both the storing up of energy and the expending of it within the normal limits, peculiar to the organism? There is pleasure in work itself. There is a sort of plant-joy in its very growth and development; a child-joy in the child's activity; a pleasure to man in doing something though it requires much effort. Theoretically the evolution-process is an unbroken continuum, not cataclysmal, not a movement of jerks, jostlings and jumps. In the past it may have been frequently catastrophic, but the indications are, that in the future, it will be quite uniform.

Health is not pain, neither is it necessarily obtained through pain. Health means pleasure, that is, the well-being feeling. The bodily tone defines the degree of health. Féré says, "His experiments agree perfectly in showing that pleasurable sensations are accompanied by an increase of energy and disagreeable ones by a diminution." Grant Allen says, "Pleasure is concomitant of healthy action of any or all of the organs or members supplied with efferent cerebro-spinal nerves to an extent not exceeding the ordinary powers of reparation possessed by the system." The feelings of strength, buoyancy, the desire to do are pleasurable, and spring from health. The feelings of impotence, obstruction, negation of the expansive movement are painful and mean ill-health.

Fear. Fear may be normal or morbid, and, like pain, may be useful or detrimental. President G. Stanly Hall says, "Fear

or anticipatory pain is probably the great educator in both the animal and the human world, even science being developed in a large measure for prevision or to eliminate the shock which is so disintegrating to the system. Those who fear aright survive." Elsewhere he states, "Not only does every one fear, but all should fear. Without fear, what a wealth of motive would be lost! Fears are necessary because they are the root of so many of the strongest intellectual interests. . . . To feel a given fear no longer over but beneath us gives an exquisite joy of growth." The fear of God is a wholesome fear, likewise that inspired through awe. Byron speaks of the "freshening sea" and the terror of the breakers as being a "pleasing fear." All have felt the uplift of the passing storm, the mountain heights, down-pouring, thundering cataract, broad expanse of open-sky. One had best fear than be fool-hardy, but "to fear aright," "to feel the fear beneath us," might not only be regarded as the "beginning of wisdom," but its end. Dr. Hall also says, "The intensity of many fears, especially in youth, is out of all proportion to the exciting cause." Just here lies the danger of fears, so many of which are morbid. The fear that comes to dominate a life, becomes a possession that is most detrimental. It is the bane of physician and surgeon, the vulnerable point for quackery. Even the temporary fears, as Virgil here and there so well describes them, "paralyzing the limbs," "sending cold tremor into the lowest bone," "the hair on end," "cold perspiration rushing out," "the voice sticking in the throat," violent trembling, palor on the cheek, disturbance of heart action, respiration, undue peristalic movement, contraction of the bladder and the glandular organs, all speak the evil influence of fear.

The following sentences from Mosso's book on Fear are to the point: "Every violent emotion leaves an imperceptible, morbid, accumulating tendency behind." "Fear alone may develop all the symptoms of a pestilential malady even when the epidemic causes are totally wanting." "More especially during epidemics does fear play havoc. From the most remote antiquity physicians have observed that the timid die more easily." This was notably the case in the Black Death scourge and London plague, and has been so in our own time in epidemics of yellow fever, cholera and smallpox. Mosso, in speaking of scurvy on board of ship says, "In every fresh tempest several died and others were seized with the malady; and when at length the captain, in whom all had great faith, died the number of patients became five times greater." Dr. Wm. H. Holcomb, who believed that the spread of yellow fever and its fatality are almost wholly due to fear, tells how all the guests and servants at a hotel were exposed to it. All promised to stay

in the hotel, be composed and nurse the patient, except one woman who had great fear and shut herself apart and was the only one who took the fever. The writer when sixteen had grave fears of smallpox in the neighborhood. So malignant a form was it, that eleven out of fourteen stricken with it died. He could scarcely eat or sleep for days from the intense fear of the disease. His mother, who had had it, finally ascertained the cause of his despondency and restlessness, gave him assurance and cast out the fear. Mosso says, "If we were to cite all the examples of hysterical women, nervous, melancholy, paralytic men who, on the simple words of a physician through faith in the efficacy of some remedy have taken courage and recovered, we should see that every day wonders and miracles worthy of the saints are performed." Dr. Holcomb states, "Fear being recognized as a powerful cause of disease and a direct and great obstacle to recovery, a wise sanitation will exert itself to prevent or antidote its influences. To eradicate fear is to avert disease, to shorten its duration, diminish its virulence and promote recovery."

Anger. Anger is a defensive emotion and has been of great service in the evolution of animal life, and like pain and fear is of utility yet, when properly controlled. There is always a strong tendency in anger to get beyond control of the individual and it then results in great evil to the organism. Violent anger generates ptomaines in the blood. All dread the bite of a furious animal because of the toxic poison present at these times. In anger the human bite is poisonous. Mothers in a rage have poisoned, through their milk, the sucking child.

If one expresses his anger, the angrier he becomes. I have noticed that in punishing a child with the rod that each blow tends to call forth another more intense, especially when one has been exasperated. Reason must here inhibit. On the other hand if anger is allowed to rise and is repressed it expends its force upon the glands and disturbs their functions. Ribot says: "I note among others, one accurately observed point: the suffering which one inflicts on one's self such as biting one's hands or gnawing one's nails; the destructive tendency when repressed, expends itself internally, at the cost of the envious man."

I know persons whom a flurry of anger incapacitates for work hours after it. I call to mind a robust man whose anger was always followed with a bilious attack. I am acquainted with another, who ordinarily is not susceptible to taking cold; does so on the slightest exposure after he has been agitated through anger.

Worry. Fear and anger have a utility, but worry is an open enemy to well-being; is disintegrating and soon becomes

pathological. The root of the word in the Anglo-Saxon *worowen*, *wirien*, "to strangle" best defines it. To worry is to strangle the life. It is manifest in anxiety, undue solicitation and fretting. It makes despondent and impotent the strongest; undermines the health as nothing else can, and is largely responsible for the filling of the hospitals for the insane. It is the bane of all life, health, progress and happiness. Horace Fletcher in his "Menticulture" regards worry and anger as the two roots of all our woes.

Many of the returns from the questionnaire "Keeping Well" are conclusive as to the evil effects of worry: "Worry, for me, brings dyspepsia and nervous disorders." Another says, "Depression and worry have broken my health." A woman writes, "I should be well did I not worry." Another says, "My poor health is decidedly improved when I forget to worry." A physician, "I know a woman always sick solely through worry." A female teacher of forty writes, "Anxiety speedily produces certain bodily symptoms, if continued; and lowered physical conditions mean less ability to do good intellectual work. So certain am I of this fact in my own experience that I defer decisions requiring my best judgment until I am physically at my best." A physician at the head of a sanitarium for nervous diseases says, "Many people who nervously break down do so not from over-work so much as from worry or mental unrest. A child under the care of a cross, fretful person will become impatient and less likely to resist disease. Many very sick recover when cheerful faces are before them and encouraging words are spoken, while gloomy countenances and discouraging words often prove fatal."

The Higher Emotions. So apparent is the wholesome influence of the higher emotions upon health that it is not necessary to dwell on this point.

Hope that is the natural enemy to fear, worry, anxiety and dread and drives off the imminent; the moral satisfaction that comes from having done well for himself and his fellows; the intellectual and æsthetical joys that spring from accomplishing something; seeing and feeling relations and unity; sympathetically entering into the life and spirit of artist and painting, musician and music, poet and poem; having the feeling of "Worship the Lord in the beauty of holiness" and taking into the life the evolution spirit of "Be ye, therefore, perfect;" doing one's very best and casting off all care,—have a significant influence upon the health and welfare of the individual and the race.

Reminiscence. Childhood lives in the present, young manhood in the future, old age in the past. Happy, natural childhood with its myriad joys, "lays deep foundations for lofty,

future decorations;" is a never-failing fountain of sweet waters that find their way adown the life, making green the barren, creating health and beauty everywhere, bringing age to renew its youth and making death a passing.

An eminent psychologist said to me, "Reverting to childhood days is a cure for my mind and body. The scenes of my childhood have saved me in sad affliction. When worn with the year's work, if I can only get back to the old farm, I rapidly recuperate and I am soon restored. It is my best medicine; these remembrances are my tonic." The writer, too, can bear testimony to the pleasures of memory and the associations of childhood days and ways as the best of cures. His period of life from five to nine, spent in a loved spot, has left an indelible impression on his life for health and happiness. The child who has never known an old homestead, a permanent dwelling place, no anchorage to perennial loveliness where'er he roams, has not received his heritage, and, though counted rich, is poor indeed.

The poet draws much health and life-content from childhood. This is evident everywhere in Wordsworth. With Tennyson "The Brook" is but his childhood song of the brook behind the old home; "flower in the crannied wall" is but the child-man philosophizing, and just so is it with Lowell in "The Cathedral."

IV.

WHAT HEALTH MEANS.

Phœbus-Apollo, born of Zeus and Leto, the god of Light, Prophecy, Music, the Arts and Sciences, was the highest Greek conception. As the god of Light, he gave light and heat to the world, creating life and health, mind and heart in man. He was the healer, god of perennial youth, manly vigor, womanly grace, the leader of the Muses, the embodiment of all that is true, good and beautiful.

Apollo's power of healing was transmitted to his son Asclepius, who under the tuition of Centaur Chiron, became the god of Medicine and therapeutical art. So great was Asclepius's skill that the dead were reanimated. Hades being rapidly depopulated, Aïdes sought help from Zeus, who fearing an invasion of his dominions by earth's mighty race of men, hurled down a thunderbolt and killed the health-giver and life-preserver.

There had been born to Asclepius two daughters, Hygeia and Panacea, who conserved their father's art. From these conceptions came the Greek notions of health, prevention of

disease and cure. E'*υφόρειν* to bring forth abundantly, *εὔφορος* active, vigorous, healthy, well-being, easily bearing, able to do and endure, and *εὖφόρως ἔχειν* to feel better were common expressions in Greek daily life. They were hygieolatrists. The statues of Hygeia personifying health represented the goddess coiled about by a great serpent, the symbol of wisdom, cunning and healing, the gift of Asclepius.

Hygiene to the Greeks meant sound body and mind. The physical notions of health were vigor, activity, youth, euphoria, grace and beauty; the mental, the power to think and feel, to love and be loved, to enjoy and appreciate life, know truth and be truly happy.

The health notions of the Romans were expressed in *salus* and *sanus*. *Salus* (*saluber*) meant safe, sound, whole, well, uninjured, preserved, delivered from sin and its penalties. The verb *salvēre*, to be well; *salve*, *salveto*, *salvete*, heaven keep you, how are you? I hope you are well, were common expressions. The two notions, safe and well in *salus* were personified and the temple of Salus stood on one of the summits of the Quirinalis.

Sanus more particularly pertained to the states of mind and body, not so much to the idea of health—greeting and well-wishing. *Sanus* meant sound body and mind, safe, hale, whole, rational, discreet. *Sanus* and *salus* both expressed health notions but with this differentiation, that *sanum corpus* signified the temporary condition of the body, allied to *integrum*, unwounded, unimpaired, vigorous, powerful, fresh, inexhaustible; while *salus* expressed the idea of constitutional soundness allied to *robustum*, hard, firm, solid, strong, lusty, robust. *Validus* and *bellus* were also used in speaking of health. *Validus* meant health as giving power of action in a physical sense. *Bellus*, used for our word "well," expressed at the same time the agreeable sensation that comes from health, the feeling of well-being, the Greek "euphoria," our coenæsthesic pleasure.

The Roman concept of health, springing from their character, manners and customs, love of power, conquest and law, Juvenal expressed in his "*Mens sana in corpore sano*," as the best gift of the gods. The Romans, unlike the Greeks, subordinated the feeling of well-being to utility and action, yet the notions of health held by both were essentially the same,—that health is the *summum bonum*, the source of all good; without it, the ills of life.

The word "health" comes from the Anglo-Saxon root "hale." From the same source come "whole," "holy," "hale" and "hail." "Whole" means entire, free from defect, complete, unimpaired, integral, sound, well. "Holy" bears the no-

tions, whole, well, health, salvation, happiness, consecrated, hallowed, guiltless, dedicated, acceptable to Deity. "Hale" means whole. "Hail" expresses a friendly salutation, solicitation, health-wish and happiness for another.

It is not necessary to draw hard upon the root-meaning of health to find that the Anglo-Saxon peoples, with the Greeks and Romans, regard it as the one desideratum, from whence come life, efficiency, morality and happiness; that health is wholeness, completeness, freedom, the holy of holies, the most sacred and essential part of being and in no wise is to be corrupted, polluted, defiled.

Could the child at birth duly appreciate the influence of health and feel it in contrast with ill-health and impotency and were given the choice of wealth, honor, power, rank, or health; were the child rational, not a moment would decision waver. "Give me health, sound body and mind." All else will come, must come, and more besides, the sum of all, that indefinable, inexplicable something called happiness, which man in his much diligent seeking rarely finds, and which too often proves fleeting and ephemeral, the feeling of a day, an hour, a moment."

The various dictionaries and medical lexicons define health as the bodily condition in which all the organs perform their functions freely, regularly and without pain, thereby making the life normal as to its duration, efficient and happy. J. H. Sterling, in "Secret of Hegel," says, "Health is as the outward sign of freedom, the realization of the universal will, that health may be set at once as sign and as goal of the harmonious operation of the whole system, as sign and as goal of a realization of life."

But health eludes definition. It may be inadequately described. It is a feeling and the affective life can never be wholly expressed, much less communicated. I may say that health is to feel well, buoyant, strong, active, ready for work, the must-do-something feeling, joyous animal spirits, expansive coenæsthesia, the desire to live always. He who has had health and lost it, or who in the midst of health has fits of indisposition, or who has long lacked health but has obtained it, or he who is chronically ill, and has his occasional hour of euphoria knows the meaning of health. He who is well and has always been so, or he who is ill and has never been otherwise, only can know health or ill-health through inference which is cold and remote from experience of sense and feeling.

However inadequate definition in the province of the affective life may be, it serves to emphasize, limit and point out. Were I to define health emotionally as expressing my own personal feelings in the temporary moments of euphoria, I

should speak somewhat after the manner of Browning in "Saul," "Our manhood's prime vigor, the wild joys of living!" Should I seek to define combining introspection and science, I should define health as such a behavior or such a result of behavior of the human organism as a co-ordinate and harmonious whole that the life is necessarily efficient and has the feeling of well-being. Ill-health, then, would be the thwarting of the body's spontaneous and harmonious activity, the negation of its efficiency, the disturbance of its well-being tone. This is definition of the personal, physical health; but mental and physical health are so closely allied that they are correlative if not practically one. The mind does influence the bodily states, yet it is not to be doubted that mental efficiency and well-being arise largely in the normal, rhythmic behavior of the organism.

Biologically considered, health might be defined as the free and harmonious functioning of an organism throughout its life-course, making it, in its peculiar evolutionary periods, efficient in the biological continuum. Philosophically, health might be regarded as the logical condition of life in the attempt to realize its freedom and overcome its limitations in the evolutionary process and thereby live its own, peculiar efficiency into the enrichment of the universal will in its endeavors for a more complete self-realization.

Mosso says, "What we call instinct is the voice of the past generations reverberating like a distant echo in the cells of the nervous system. We feel the breath, the advice, the experience of all men, from those who lived on acorns and struggled with the wild beasts, dying naked in the forests, down to the virtue and toil of our father, to the fear and love of our mother."

Man is the result of the blending of many life interests. He has come up from the past. His course has been a long one, but it is now only begun. He is a part of all nature and must evolve with her. He must adjust himself to the upward movement and come into close *rapport* with the universal, endeavor process. Nothing short of this is abiding health.

The remote end of personal hygiene is racial welfare. The Egyptian priest emaciating the body by meagre vegetable diet for the spirit's sake; the Stoic divesting himself of all he possessed and retiring within his own subjectivity, rejoicing in nothing but his independence of all externals; the religious devotees crucifying the flesh and making life miserable through long fasts, weary vigils, lack of air, sunshine and exercise; those with false, moral convictions who abstain from simple, harmless joys, the passing pleasantries that make so much for health; the scholar wholly dedicated to learning, retiring to his cave, unmindful that the intellectual life is but one of the

aspects of being; the athlete ruled by the notion, athletics for athletics' sake, not aware that man needs a many-sided training; the man in business whose life is dominated by the love of material gain, ignorant of the aim and end of living,—all stand a barrier to the welfare and happiness of the race.

Veresaeff in "The Confessions of a Physician" says, "Decay lies hidden in man from the tenderest age. His body begins to decompose before it has even had time to complete its development. Nearly every one has some ailment. Normal man is a sick man. A woman may be defined as an animal naturally weak and sickly only enjoying occasional bright periods of health which show up against a background of uninterrupted disease. The healthy person represents a happy freak. The world is a gigantic infirmary." Doubtless Veresaeff is somewhat morbid, disappointed with the progress and results of the science and art of medicine and seeing the abject condition of life and living in Russia. There is a vast amount of ill-health in the world, brought to us from the past and augmented by our own unhygienic, immoral living. There are, however, encouraging signs. Even with the great increase of population in the cities of the United States from the rural parts and the incessant flux of the lower and ignorant classes from foreign countries, there has been a very perceptible increase in the average length of life in the last fifty years. In England three centuries have added fifteen years to the average of life. This is due to scientific sanitation, especially as it is now applied in the cities, some of which are now healthier than the country, where often little attention is paid to sanitation. Two or three years of effort have rid Havana of yellow fever.

The interest in health is universal as is seen by the health-greetings once not merely formal expressions. The Greeks said "ὑγίαινε," "Be well," "be healthy," "χαῖρε" "Hail," "farewell!;" the Romans "*Quomodo vales?*" "How is your strength," "*salve*" "*salveto,*" "*salvete,*" "Heaven keep you," "How are you?" "I hope you are well;" The English say "How are you? I hope you are well;" the Germans, "*Wie befinden Sie sich?* "How do you find yourself?" or "*Wie geht es?*" "How goes it?" The French, "*Comment vous portez-vous?*" "How do you carry yourself," or "*Portez vous bien?*" "Carry you well?" The Italians, "*Come-sta ella?*" "How do you stand?"; the Spanish, "May you live a thousand years!"; Russians, "How do you live on?"; Polish, "How do you have yourself?"; Swedish, "How can you?"; Hollander, "How do you are?"; Japanese, "*Kon-nichi-wa?*" "To-day, How?" or "*Ikaga-de-suka?*" "How do you feel to-day?"; Chinese, How is your stomach?" or, "Have you eaten your rice?"; Persians, "May your shadow never grow less;" referring to the hot noon-day

sun when there is but little shadow; Arabians, "May God strengthen your morning!" or "May your morning be good," or "How are you?"; Egyptians, "How do you perspire?" a dry skin meaning a dreaded fever; Zuñi Indians, "How have you passed the night?" or "How have you come unto the sunset?;" the Orinoco Indians, "How have the mosquitoes used you?" so troublesome are these pests.

There are the formal greetings as "good morning," "good-by" indirectly referring to health and the "weather expressions" which more directly touch the mental condition and bodily tone, "What a fine day!" "This is miserable weather!" We are ever ringing the changes on our weather vocabulary. We are up and down with thermometer and barometer. Carpenter, in his "Mental Physiology," says, "There are many persons who pass their whole lives in an alternation between cheerfulness and depression; the former state being favored by freedom from anxiety, by the healthful activity of all the organic functions, by a bright sun and a dry, bracing atmosphere; whilst the latter is immediately induced by mental disquietude, by a slight disorder of digestion or excretion or by a dull, oppressive day."

The will to live is the oldest and most deep-seated part of our being. It manifests itself everywhere, from lowest plant to highest animal form; in the ooze of the sea-depths, on inhospitable mountain heights; in frozen zones and boiling geysers; in earth, air and water. The shrub hanging from barren cliffs gnarls root and branch for the struggle. The beech when girdled is three years in dying and in the final throes puts forth a hundred young. The hyacinth mother-bulb, wounded, perpetuates her life in a dozen bulblets. The fern leaf throws off its millions of spores. A yeast germ, had it opportunity, would multiply to the size of the earth in a fortnight. Some bacterial forms, would in the same time, fill the oceans were their waters the proper nutrient broth. A star-fish can lay thirty-nine millions of eggs in a day; an oyster eighty billions in its life course; a common toad ten thousand; a queen honey-bee five thousand eggs in a day. The human female ovaries contain from thirty to seventy thousand ovule germs, several hundred of which develop and are discharged. According to Lode, the human male discharges weekly two hundred and twenty-six million two hundred and fifty-seven thousands spermatozoa. This is Nature's way of immortalizing herself. Suicide, then, is thwarting Nature and he who does it must be regarded temporarily or permanently insane. The truly sane never suicide. In our civilization, even one's honor at stake, no matter how fallen, rationality insists upon preserving the life.

Insanity is disease, ill-health. Suicide falls into the same category. The suicide of the stoic Zeno, Cleanthus, and many great stoics shows to what straits an intensely subjective life may bring the best of mankind. Man's welfare cannot lie in sheer independence and in total indifference. Virtue for virtue's sake, our highest ideal, is too subjective for our present stage of evolution. Of selfishness the most selfish, of immorality the most immoral, it is to retire cowardly from the arena of life and wash the hands of the world and its struggles.

Pessimism is mental, moral or physical ill-health or all. Pessimism inevitably leads to some form of ill-health and ill-health is an open way to pessimism. For the pessimist there is no life-expansive process. The life movement is ever contracting. He lacks the spirit of elasticity and accommodation, experiences no spontaneous outbursts of joy, exhilarations, exuberance of the life current issuing from the surplus strength, over-flowing vivacity, euphoric buoyancy; is never conscious of a background feeling of naïve, animal life. He consumes himself in snaps, snarls and bites. Pope, hunch-backed, miserable, petulant, acrimonious and supercilious; Byron, brilliant, immoral, haughty and contemptuous; Schopenhauer, irregular, disappointed, irascible, unwilling to call anything good but absolute death; Poe, truly poetic, but self-consuming, drunken, morbid and delirious; Carlyle, with his poor, weak stomach ever thrusting itself into consciousness could little appreciate the joys of life. For the pessimist there are no sunny days, green fields, meadows, clear skies, cool brooks, shady forests and song of birds; no racial echoes of a distant paradise. The Golden Age is leaden, Saturn hoes in toil among the thorns, the Arcadian days cheerful with song and dance are but brute barbarism. The past is dark, the present miserable, the future gloomy. He cares not for a to-morrow. He has no intimations of a Valhalla, a New Jerusalem, a Tree of Life. Why should he want its leaves and fruit of immortal healing?

In sharp contrast to the spirit of pessimism is the life-joy that knows no bounds, welling out of the animal surplus, the source of all real health. Hawthorne in "Marble Faun" has admirably portrayed the "surplus-life" in the simple, rugged, sportive, animal-spirited Donatello, born and bred on the sunny vineyard slopes of sylvan Tuscany. Such physical well-being, rhythmic bodily tone, euphoric health form the true ground for sanity, efficiency and happiness.

V.

HYGIENIC AND PEDAGOGIAL CONCLUSIONS.

It has already been stated that the questionnaire "Keeping Well" has been answered by intelligent and professional persons; that the questions on the sale and use of drugs were presented personally to druggists and physicians. These inquiries have sought personal experiences and not theories. Where theories have been given they have been thrown aside. The answers, generally, show interest in personal hygiene, intelligent self-examination, and care in presenting the facts. Had the questions on "Keeping Well" been answered by the ignorant and by those engaged in manual labor the facts might be somewhat different. The material at hand varies greatly in value. Some of it is trivial. Some is illustrative of commonplace truths, while much is merely suggestive. But from this written material, many personal interviews, reinforced by general observation, reading and self-examination the following conclusions are justified:

First. Health is an individual matter, a truly personal condition. So personal a matter is it, that viewed from the standpoint of hygiene the philosophical dictum of Protagoras, *πάντων χρημάτων μέτρον ἄνθρωπος* seems at once a truism while the *ἕν καὶ πᾶν* of Zenophanes apparently has no ground. The individual appears his own health standard. Though all are under the general hygienic laws, food, clothing, sleep, mental and physical exercise, recreation and rest being necessary, yet the individual is thrown upon the Socratic *γνῶθι σεαντόν* to judge for himself the amount, manner and periodicity of these necessities. It can be said, broadly speaking, that too much food is eaten, too little exercise and sleep are taken and the labor undertaken is too burdensome and taxing. It seems to the writer that the individual variations in personal hygiene deserve the most careful attention and study.

Second. There is lack of knowledge of the fundamental laws of physiology and hygiene with many, and little study is made of one's own personal limitations. Some are forced through ill-health to study themselves, but too often this study serves to emphasize the morbid mental or physical conditions. What is needed is self-study in health, that the health-capital, if not augmented, may, at least, be sustained and the individual be kept at "the top" of all he is capable in the various stadia of his life.

Third. Though the writer does not see the hygienic condition of the world of to-day as discouragingly as Veresaeff, the vast amount of ill-health reflects discredit on science and our social organizations, the home, school, church and physician.

To whom or what shall the blame chiefly be laid? Is it man's ignorance, carelessness, lack of interest in posterity? The question involves inquiry as to the efficiency of medical science, the instruction in the schools, parental intelligence and training, sermons from the ministry, sanitary laws and their enforcement. The rank and file are not yet thrifty animals, a stage so necessary for higher evolution, efficiency and happiness. There is, from the age of thirty to forty-five a striking lack of mental and physical reserve force, the insuppressible buoyancy of Donatello. Comparatively few have great amount of health reserve.

Fourth. As yet the people are not far removed from superstition, talismanic charms and the medicine man. The words "doctor" and "medicine" have great influence. Much faith is grounded here which many physicians fail to appreciate, leaving this weak point of attack open to quacks, advertisers and patent medicines. Too many physicians are ignorant of mental science and its use in therapeutical art. One is surprised to find how many people have a sort of medicine habit; whether ill or simply think themselves so, resorting to taking much medicine of some kind, and often of any kind as cure-alls. It is astonishing how credulous people are, using as they do great quantities of "patent medicines" as they appear by the scores on the American market each year. The quack, advertising doctor and incompetent physician come in for a great share of money-waste dealing out ill-health and death. Statistics can never show the loss of life, multifarious health evils, and money-waste at this game between artful gamesters and the uninitiated. It is encouraging to note that the most competent physicians no longer prescribe much medicine. They are emphasizing nursing and care, the study of personal conditions and limitations.

Fifth. Man's emotional life is one of the deepest aspects of his nature and has a far reaching influence for health or ill-health. Morbid fear, dread of disease, great anxiety, anger, worry, unpleasant surroundings, discontent, directly militate against health, making the life susceptible to disease. While the feeling of security, well-being, contentment, self-control, joy, the ability to revert to happy hours, childhood days, duty done, attainment, the consciousness of growth and development are highly conducive to health.

Sixth. Man's moral and religious life is barometric of his physical and mental hygienic condition. Whatever improves the health and adds to its permanency makes man better, greater, truly more religious and places him in line of natural development. Crime, pessimism and suicide have root in ignorance and draw nourishment from some form of mental or phy-

sical ill-health. Health-ideals are needed; what man hygienically can be and ought to be. The text, that a greater degree of health in the individual and the race means more morality, better religion, greater happiness, higher efficiency, more rapid progress, fuller and richer self-realization, ought never with parent, teacher, pastor and physician to seem hackneyed and commonplace. Such a text contains an almost limitless number of teachings, interesting, wholesome, practical and influentially far-reaching on the welfare of the individual and the race.

I here desire to thank President G. Stanley Hall for having suggested the study to me and for his stimulating words from time to time. I am indebted to Professor William H. Burnham for help and encouragement in the work; also to the druggists and physicians who have given me much valuable information, the educators who have been interested in the study and all who have answered the questionnaires.

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REMARKS ON THE PSYCHOLOGY OF CLOTHES.

By Louis W. Flaccus, Ph. D., Sometime Fellow in Clark University.

I.

All this paper aims to do is to open up a problem for investigation and discussion, to set forth a few generalizations looking towards its solution, and to indicate briefly by what methods of observation and collection of facts such generalizations may be substantiated.

No one, I think, will deny the general statement that clothes have a marked effect upon our mental life. But it is one thing to make a broad statement of this sort, and quite another thing to ground it scientifically, and to define with some approach to accuracy and thoroughness the nature of this effect and some of its causes.

The problem at hand shares with many others which have been recently taken up certain difficulties in the way of a scientifically accredited discussion. The following is the crux of the matter. Certain mental states are so complex and of so subtle an origin that they cannot be dealt with analytically with any measure of success by the current methods of psychology. The less a chance for physiological and experimental work, the greater the difficulty. Thus, while we have some excellent papers on the feeling-tone of sounds and colors and the æsthetic value of certain simple forms, we have much wild theorizing on such complex matters as the nature of evanescent æsthetic emotions or the total affective state of consciousness during the appreciation of a tragedy. The psychology of the crowd, of the weather, the study of ideals, etc.,—these are all interesting problems. The psychical effect may be traced; the demand for an explanation is justifiable; we must, however, admit that this demand overtaxes the present resources of psychology. To hope that psychology will ever be able to give a scientific formulation of all that stirs in the depths of consciousness is to be unduly optimistic. There are, I believe, certain experiences so extremely subjective that they do not admit even of the preliminary process of fixation.

Luckily for us the problem of the effect of clothes on the psychical life is not hopelessly insoluble, although in some of its aspects it is on the ragged edge of scientific analysis. There are what the Germans would call Anhaltspunkte. Cer-

tain effects are indirectly traceable to physiological factors,—skin sensations of pressure, contact, temperature, etc.,—others show the simplest routine working of association of ideas. The interest there lies solely in bringing out the facts of connection. Much of the material then comes under the usual rubrics of psychology. When physiological clues are not to be had and psychological terminology proves insufficient, nothing can be attempted beyond a few tentative suggestions.

II.

The problem was taken up at the suggestion of G. Stanley Hall. It was he who drew up and sent out the following questionnaire:

TOPICAL SYLLABUS, No. 3.
(Academic Year 1904–1905.)
THE PSYCHOLOGY OF CLOTHES.
State sex and age.

1. How does a sense of being well dressed or the opposite affect you? How are you affected by shabby or ill-fitting gloves or shoes?

2. Do you feel a change in your personality, and if so describe it, from being (a) in conventional evening dress, (b) in an outing costume which gives unwonted freedom of action?

3. Do the materials of your dress affect your feeling, *i. e.* whether they are filmy soft stuffs or stiffer and more unyielding material? Do you like the rustle of silk? Does the wearing of fur have any special effect upon your mental state? Does the character of your hat? Do you like to wear a train? Why?

4. How does the presence of some defect in your clothing, which may not be obvious to others, affect you? Are you conscious of a difference in feeling due to fresh, dainty underwear, irrespective of external dress?

5. Are you particular about the fit of your clothes or to have them of the latest style? Have you special preferences for certain articles of clothes, *e.g.*, hats, lace, jewelry, fine gloves or shoes, handkerchiefs, pins, neckties, etc., so that any extravagance in dress is likely to be in that direction?

6. What is your feeling towards imitation lace, jewelry, etc.?

7. What proportion of one's total personal expenditure do you think should be devoted to clothes?

8. Children usually like to "dress up." Did you do this when a child and in what lay the enjoyment of it? As a child were you particularly conscious of your clothes, and to what influences would you attribute this?

9. How are you impressed by the dress of others? Does it affect your estimate of a person and if so in what ways?

10. What individual tastes and preferences do you sometimes indulge that are at variance with fashion?

11. What can you suggest about the care of clothes and its educative value?

12. What do you deem important in the care of nails, dressing the hair, cosmetics, face washing, etc.? Can cleanliness be excessive, and what about exposures of certain parts of the body, both in society and to sun and air in summer—going barefoot, gloved, bareheaded, etc?

13. What reforms in the dress of men, women and children would you suggest, and what about too much or too little clothing?
14. What about ornaments and adornments generally?
15. Say something about canes, parasols and fans, and also state any experience with masks, masquerades, theatrical costumes; the *lies* of clothing, *e. g.*, padding of all kinds, fits, pinchings, tight fits, and loose flowing raiments, and what changes are natural at different ages and periods of life.

Kindly send returns to

G. STANLEY HALL.

CLARK UNIVERSITY,
Worcester, Mass., February 15, 1905.

This questionnaire was sent to a Normal School in the State of New York. One hundred eighty-one sets of answers from girls were received.

Judging from the answers, the questionnaire admits of improvement on several points. Questions 7 and 12, especially the first part of 12, bring out some interesting facts as to expenditure and as to hygienic practice and personal care of the body, but scarcely anything of psychological interest. This is all the more disappointing because the questions are as a rule answered most fully. 8 contains the ambiguous phrase "dress up." 6, 9, and 14, to judge by results, hardly bring out the complex mental processes they are aimed at.

A few words as to the general nature of the answers. They seem to have been given conscientiously, in good faith. They are brief, schematic; there is an air of sameness about them which indicates inexperience in analysis and introspection.

Because of the very limited number of answers, little would be gained by working up the material in percentage form. Again, there is little need of taking up the questions in order, for that would mean, in an unsystematic questionnaire of this kind, missing connections and convenient groupings. Constructive comparison must have some place; always, however, on the basis of some suggestive fact.

I shall arrange the material in three groups, as follows:

1. *Minor and incidental matters; psychological titbits, etc.* Questions 7 and 11 belong here.

2. *Changes of self-feeling; fluctuations and changes in personality; differences in feeling-tone; diffusive and expansive effects.* Here belong questions 3, 12, in part at least, the last part of 5, and all of 15 except what relates to the lies of clothing. Questions 1 and 8 are transitional.

3. *Effects on the self as a social reflex phenomenon.* This means a discussion of such factors as social self-seeking, fluctuations in social estimates, group-consciousness and group-opinion, fashion, etc. Questions 1, 4, 9, 6, 10, and the first part of 5 are of this group.

Group I.

Question 7 brought various estimates as to what amount of one's total expenditure should be devoted to clothes. All that can be said of the answers is that they are interesting. 131 of the 181 give a definite fraction, varying from ½ to $\frac{1}{10}$, sometimes on the basis of total income, sometimes on that of total expenditure. About $\frac{1}{5}$ represents the average. Very striking is the wide range between maximum and minimum. It represents something more than a difference of opinion in matters of domestic economy; it suggests a wide variance in the degree to which the thought of clothes may fill consciousness. To a person who considers ½ of his total expenditure the proper amount to be given to clothes, the primitive functions of protective covering and pleasing ornamentation with its simple delight in color, form, and outline have yielded in importance to the creating of secondary social demands,—of leadership and distinction, love of praise, emulation; in short, all the feeling-elements a desire to be fashionably dressed implies. To these must be added a volatile temperament which delights in self-mutations. The typical case of the young man who would wear a suit of clothes once or twice and then would order a new one is not to be explained merely in terms of an impulse to spend money for the sake of spending it. Of course there is such an impulse; it is as simple as its counterpart, the collecting instinct. Its chief characteristic is a defective inhibitory mechanism for the checking of chance suggestions. Extravagance in jewels may sometimes be explained on such grounds; extravagance in clothing, rarely. The latter generally must be laid at the door of secondary feelings of the kind instanced. A man gets tired of wearing the same suit or the same tie. What he really wants is a change in his "material me" with whatever subtle emotional displacements that brings. The far-reaching character of such changes will be dwelt on later. Suffice it to say for the present that the mere change from a dark suit to a light one will often induce a direct change of mood. If we add to these factors of self-change and self-accentuation the demand for social recognition and the desire of impressing others, we can understand the peculiar element in extravagance in clothing. The smaller the number of large, permanently established interests, —of family, property, vocation, etc.,—the more likely is consciousness to occupy itself with the husks of being (to use a phrase with Carlyle's spirit in it). Remove the check of other interests, and the consciousness of clothes will make undue demands on time and money. Such a lack of permanent, vital interests has still further consequences: an almost path-

ological craving for newness and superficial self-changes. This is borne witness to by the familiar phrase, "I have worn this twice; I am tired of it."

The value of the answers to question 7 is lessened because of the frequent acknowledgment on the part of the girls that they have had little experience in such matters. Of the 43 who do not set down a fraction, 25 frankly admit that they do not know, while the others give modified answers: "all depends on one's station in life;" "whether one is in society;" "it can't be estimated on the grounds of income," etc.

Question 11 inquires into the educative value of the care of clothes. 53% do not discuss the matter in any way. The others are about equally divided in the following three groups:

1. Such as dwell on the æsthetic qualities it tends to develop; taste, judgment in selecting suitable color combinations, harmony, discrimination, etc.

F., 19. The care of clothes teaches us the value of harmony with one's surroundings.

F., 18. The care of the clothes trains the mind to notice beauty in color combinations, and cultivates taste for beauty in all things.

2. Such as recognize in the care of clothes a factor of social morality, developing as it does habits of cleanliness, neatness, economy, accuracy. Good taste is, as one girl writes, a valuable thing to have, but these qualities are still more important.

F., 17. Everybody owes it to society to be well dressed.

F., 19. The care of clothes makes us methodical and careful also about other things.

F., 18. It teaches neatness and better manners.

F., 18. It teaches us to be neat and painstaking.

3. Such as recognize a moral factor of a deeper kind: influence on preferences, worth estimates; heightening of self-respect, of the sense of responsibility.

F., 22. When a person dresses nicely an amount of self-respect is given which cannot be had in any other way.

F., 19. Clothes have an educational value; they give a person a certain responsibility and independence. They have a great deal to do with the characteristics and bearings of a person.

F., 19. Clothes make people more self-respecting.

F., 19. The care of clothes adds to one's permanent right interests, and hence makes one more truly educated.

Apart from their failure to recognize the law of specific energy of capabilities, which does not allow the ready transference of efficient handling of one set of materials to other sets, these answers represent sound judgments on the educative value of clothes. I think psychological experiments would tally with the observations of daily life in assigning to women, other things being equal, a finer discrimination in tints, shades, a much keener sensitiveness to harmonious color schemes than is the case with man. At this point fashion interferes least with æsthetic demands; and the cumulative effect of interest and

training in such matters cannot but lead to a refining of æsthetic sensibilities of that order. When we find with women a striking case of poor taste in colors, it is not so often due to lack of training of the eye, as in the case of man. It is rather a lapse to the sexual attraction machinery of lower races. This is true of the liking on the part of negro women for flaring combinations of bright red and yellow. It would be very interesting to correlate the growth of a sense of the offensively noticeable and its æsthetic approval of attenuated color-schemes with such socially grounded feelings as bashfulness, self-effacement, diffidence.

Experience testifies to the moral training value of clothes. It shares the strong regenerative influences of property. It is a mistake to treat of property objectively, since it may be viewed as a grouping of psychical states with a certain feeling-tone. The psychical equivalents of a heightening of moral tone through the care of clothes must be found, and since they can be found only in close connection with self-feelings, we must postpone a full discussion of this topic.

Group II. Changes in Self-Feelings, Fluctuations in Personality, etc.

Question 3 touches on definite mental changes due to materials and texture of dress, and on the feeling-tone of certain sound and skin sensations.

1. *Weight of clothing:* Heavy goods are disliked. They have a depressing effect. Sensations of pressure and muscle-fatigue are responsible for this. Heavy shoes or skirts put an additional strain on muscles and joints, especially in walking. Or if the pressure is felt at the shoulders, there is a tendency to stoop, and this interferes with the action of the lungs and the free circulation of the blood.

Heavy hats favor a depressed mood.

F., 18. In a large, heavy hat my spirits are low.

Pressure on the head has a more diffusive effect of discomfort than pressure on hand or foot.

Other relations of the hat to emotional states may as well be taken up here. The answers plainly bring out the fact that the mood changes with the hat.

F., 18. A broad hat makes me feel jolly.
F., 18. If I have a fancy hat on I am in a coquettish mood.

Large hats, as a rule, are preferred to smaller ones. In many cases social self-seeking is directly responsible. In others, however, the relation to physical stimuli is directly traceable.

F., 18. If my hat is flat on my forehead I feel depressed.
F., 18. I feel brighter in a hat rolling away from the face.

In such cases we must reckon with excessive stimulation of the eye because of want of protection, and, on the other hand, with the annoyance caused by a hat set so far forward as to irritate the eye by obstructing the field of vision and interfering with the normal functioning of the eye, focussed as it is for distant objects.

2. *Softness and stiffness of cloth:* The pleasurable feeling-tone of soft goods as compared with stiff, unyielding materials is very noticeable.

The following phrases are used with reference to stiff goods: uncomfortable, awkward, formal, self-conscious, walled in, as if in a case, bold.

Soft goods are generally liked. The girls feel: dainty, more talkative, happier, demure, light, graceful, girlish, gentle, refined.

The psychological factors that enter are very complex.

a. *Skin sensations of pressure, tension, contact, etc.:* Stiff goods, especially when they are next the skin, do not allow of an equal distribution of pressure over the skin area. This intensifies and in a sense multiplies our consciousness of contact. This is especially true of the mobile parts of the body and at the joints where there is a continually shifting tension of the skin. A glove of stiff material is, for instance, at once more noticeable and more annoying than stiff leather leggings would be.

In addition there is the greater liability to interference with natural movements. Stiff goods do not break into easy, natural folds. James speaks of the habits of cloth; and there is something characteristic and undeniably pleasing about a pair of gloves after they have been worn for some time. It is lack of such adaptability which gives to very stiff and new goods an unpleasant feeling-tone. Any bit of clothing that does not adapt itself to the varying postures and movements of the body interferes with such movements. The feeling of restraint or constraint ("walled in," "as if in a case") is but a primitive phase of the being checked or blocked which plays such an important part in the economy of the more complex mental processes of desire, attention, etc., except that it lacks all the compensating features of the latter, such as tension, anticipatory pleasure, etc. That a few of the answers express dislike of very soft, clinging materials is further proof of the unpleasantness of checked natural movements, for clinging goods often interfere with these quite as effectively as do stiff goods.

b. *Self feelings; facts of diffusion and extension, illusions:* Characteristic is the diffusive nature of the feelings experienced. Stiff goods seem to make us feel stiff all over.

F., 20. I feel starched in a stiff waist.

The same is true of the agreeableness of soft goods. Such adjectives as graceful, demure, girlish show very clearly the diffusive character of the experiences, and exhibit them as affections of a self; that is, the stiffness or softness of the cloth affects the total conception of the self as a presented system of representative elements,—meaning by representative elements feelings with the mark of intimacy and authority. It cannot be doubted that there is such an effect,—a pleasurable or disagreeable tilting of consciousness, due to the materials of clothing.

This brings us to certain illusions of extension of self, or, as Lotze has it, "a sympathetic expansion of our sentience beyond the limits of our body." The rather fantastic turn Lotze gives to such illusions should not keep us from acknowledging that they are experimentally verifiable facts. If we touch objects with a cane the sensations of touch seem to be located at the end of the cane. Or if we hold a book or some other object in a gloved hand and finger it the sensations, which as a matter of fact result from the inner surface of the glove pressing on or moving across the skin, are projected; they seem to be located at the outer surface of the glove and to result from the friction between it and the book. To quote Lotze (Microcosmus, p. 588):

> We transfer our actual feeling of resistance, and now we fancy that we feel the contact of the rod with the object at a distance from us as directly through sense as we do its contact with the surface of our hand. On this double feeling of contact—a beneficent sensory illusion—depends all use of implements; none of them would be pliable enough for us if we were aware merely of its presence in the guiding hand, and not, with a like palpable distinctness, of its action on the material to be operated on. Only on this condition is the stick with which he gropes of use to the blind man or the probe to the physician.

Such illusions may be observed with reference to clothing, as when our shoes touch the ground or when the shoulder of our coat touches another man's, no matter how lightly.

Now all such projection-illusions are expansions of self. Let us again quote Lotze (p. 592 *op. cit.*).

> Wherever, in fact, we bring a foreign body into relationship with the surface of our body—for it is not in the hand alone that these peculiarities are developed—the consciousness of our personal existence is prolonged into the extremities and surfaces of this foreign body, and the consequence is feelings, now of an expansion of our proper self, now of the acquisition of a kind and amount of motion foreign to our natural organs, now of an unusual degree of vigor, power of resistance or steadiness in our bearing.

Lotze makes some fanciful applications of this principle. The fondness for high headgear, lofty coiffures, bearskin caps, sugar-loaf hats is explained in terms of a pleasurable lengthening of the rod of self.

Whether or not we are willing to go to the same lengths we

must at least admit that the incorporation of originally unrelated objects into the "Me" as a system of presented elements is one of the commonplaces of psychology. Our clothing,—the continual source of impressions of outline, color, etc., and the form under which we habitually see ourselves and our fellows,—is ordinarily felt as an integral part of ourselves. As one of the answers puts it: "Clothing should be well cared for; it is part of us." To what extent this integration has taken place is clearly brought out in the answers to that part of question 12 which deals with the exposure of parts of the body. For instance, going without gloves is said to give a feeling of being not fully dressed.

F., 19. I never feel dressed without gloves.
F., 18. To go about without a hat or gloveless gives me a sense of carelessness.

The wearing of gloves, part of feminine etiquette, has become such a matter of habit that the glove seems part of the hand it encases. The following is in point also. We all know with what intense dislike Sunday clothes with their inevitable shoes and stockings are worn by a boy who is allowed to go barefoot during the week. The shoes are felt to be an irksome addition, something that ought to be kicked off.

Let us go back to our example of double contact. It is evident that the less the attention is distracted by irritating features in the surface of actual contact, the more perfect will be the illusion as to the projected point of contact. If the surface of the head of the cane should be rough or in any way inconvenient to handle, the judgment as to what we were touching with the end of the cane would be defective. This has an important bearing on the matter of incorporation in the self of foreign objects,—unyielding materials of cloth among them. The line of cleavage,—to make use of a roughly pictorial expression,—in such cases of an irritable lack of adaptation will be between the bodily organ and the object, with a minimum chance of possible integration. On the other hand a tool of suitable form, material, structure or one much used is easily felt to be part of our self. Two essential points must not be overlooked.

(1) *The part played by the conative, volitional element in consciousness.* The irritating sensations spoken of check purposeful activity (in the example of the cane, exploring the object.) If the head of the cane is disagreeably rough there is an impulse to drop it and with it the purpose of exploring the object. Such a volitional check is very disagreeable. It brings about a strongly tensional state of consciousness with the feeling that the tool is something foreign. The reason is to be found in the interference of pain sensations caused by the rough surface or

jagged edges of the cane with the muscular adjustments gone through as steps towards the exploration of the object. On the other hand, a tool perfectly under our control causes the line of cleavage to be between tool and object. Thus the expert swordsman whose foil has become almost a living thing experiences an expanse of self-feelings.

(2) *The distinctively pleasurable tang of certain self-feelings, such as the sense of power, of initiative, of individuality, and of making a thing one's own.* Control involves highly pleasurable experiences of expansion and accentuation. Such elements are, of course, most distinctly present at the point of transition, of integration. There must be just enough zest to the thorough appropriation of an object and the resistance it offers. It takes some time for us to get accustomed to a new suit; new clothes make self-conscious. There is much pleasure in their gradually becoming part of ourselves. Now extremely stiff goods, because of not conforming to the natural flexions of our muscles, etc., offer too much resistance to this process. In the phrase "as if in a box" this foreignness of the clothing to the self is very plainly connoted.

3. *Texture and Quality.* The disagreeable feeling-tone of rough materials is very marked. Rough woolen goods are disliked. They give the feeling of creepiness.

F., 18. I am cross when I touch rough materials.
F., 21. I can't bear to touch woolen goods; they make me shiver.
F., 21. I dislike the feeling of flannel next to my skin.

Rough materials rub against the fine hairs of the skin and irritate the sensory organs at their base. An irritable mood very often results. The ruffling of feathers is in birds an index to an excitable or irritable state. A dog or a cat resents being stroked the wrong way. We speak of a ruffled temper; and there is hardly a finer example of the expressiveness of language than the German terms, "widerhaarig" and "kratzig."

Smooth articles are liked.

F., 21. I like to rub my hand on a velvety surface.

In such cases about all we can say of the matter is that the "feel" of certain smooth materials is pleasant. There is, of course, a great deal of variation from person to person, just as there is in case of experiments on the grading of tastes and odors according to pleasurable feeling-tone. Not all persons, for instance, like the "feel" of velvet. A girl writes:

F., 18. I cannot bear to touch velvet. I feel the chills running up and down my back.

Filmy goods have a distinctly pleasurable feeling-tone. They are said to give a feeling of gracefulness, of lightheartedness.

F., 18. I feel as if I wanted to dance.

This is especially true of light gauzy stuffs and laces. The effects are not all reducible to lightness and absence of heavy pressure. The total state of consciousness is very complex and hardly analyzable. There are elementary æsthetic reactions to outline, motion, variety (broken surface of laces, etc.). There are overtones of Einfühlung, self-feelings of various kinds, general associational effects, and that particular kind of association which may be called symbolic transference of meaning. A filmy dress means a ball or some social function; slipping on a smoking-jacket means relaxation; putting on evening dress means a certain formal, correct sort of behavior. Of the social side of this we shall speak later. From that point of view its equivalent is acting up to social expectation, a task to which the histrionic in man readily and easily responds.

Silk occupies a peculiar position. In most cases the "feel" of it is said to be agreeable. In some instances it suggests high rank, being well dressed, etc. To some the rustle of silk is decidedly annoying, especially the pronounced rustle of very stiff silk skirts. It grates on the senses; is of a harsh quality. It is felt to be as disagreeable as a scratching pen or a knife scraping across a plate. Still, the great majority find the sound of rustling silk highly agreeable. A two-fold division must here be made.

1. *Direct pleasurable quality:* As when the rustle of silk is said to be soothing.

2. *Pleasures of association and suggestion:*

F., 17. The rustle of silk suggests dignity and high rank.
F., 18. It reminds me of the rustle of leaves in the woods.

Furs have no very marked diffusive effect on the self, except in a few cases, as when a girl says that furs make her feel too much like an animal. The effects are specific:

(1) Direct pleasurable feeling of touch.

(2) Temperature and contact sensations.

Furs are disliked because they give a hot, choked, stuffed feeling.

(3) Suggestion, association.

They are held to give feelings of wealth, pride, of being well-dressed, of the lady-like and elegant.

Question 5, or rather the last part of it, deals with preferences and extravagances in articles of clothing, and is of minor importance. The answers bring out some striking facts. The following is the scale of preference:

Shoes	29%	Underwear	6.9
Gloves	20.8%	Jewelry	6.1
Neckwear	13.1%	Ribbons	2.8
Hats	8.4		

Surprising is the marked preference for shoes and gloves and the low percentage of jewelry and ribbons.

{ Question 15. Masks, theatrical costumes.
{ Question 8. Dressing up.

Of the answers to 15 received only a small proportion, 20%, deny any change in personality due to masks, theatrical and masquerade costumes. The answers are rather general and lacking in details.

F., 22. I don't feel like myself.
F., 19. I feel like a different person when wearing a mask.
F., 18. I feel as though I had left myself behind; feel like the person I am impersonating.

Very pronounced is the ability to take an imaginary part better in a theatrical costume. The latter acts as cue.

Feelings of strangeness and boldness are perhaps most closely connected with the wearing of masks. A small percentage of such cases is traceable to the sense of having one's identity well concealed and opportunities for reckless acts. It is like bobbing up to the height of one's spirits because the social pressure,—of possible censure, restraint, etc.,—is removed. And the feelings of silliness and self-consciousness confessed to by some of the girls may be explained as the dread of doing the unconventional or as helplessness. But there are other factors; instances where there is a direct and marked change upon putting on a mask or a theatrical costume. Our voices seem strange to us. There is an inrush of new feelings, a new dignity, a proud bearing or a boisterous entering into one's part. To what extent costumes suggest the playing out of a new personality depends largely on one's histrionic talent. Children have it to a marked degree. Their personality,—if we mean by personality a complex interrelated system of habits, meanings, values, feelings of intimacy, etc.,—is only partly organized; if a new element enters through some channel of suggestion it is apt to reorganize the whole system or at least to affect its general tone. Clothes very often give the needed dramatic cue. Emotional disturbance of some kind, of course, facilitates such an incursion. People of an impulsive temperament at a gathering where spirits are high unconsciously lapse into mimicry and impersonation. This again is very noticeable in children. Again, when the content of the self is flexible in the sense of intimacy easily transferred to other experiences, mummery is entered into recklessly. Witness the extent to which masquerades, carnival processions, etc., have diminished in the last five centuries, and the corresponding growth of the idea of personality. In line with this is the defective exhibition of personality characteristic of many actors.

Question 8 brought few answers because of the ambiguity in the term "dress up." Wherever this is taken in the sense of disguise or acting a part, the answers were to the effect that as children the girls were very fond of dressing up, taking the parts of "grown ups," wearing long skirts, playing at mother or impersonating favorite characters from their story books. In some cases the swish of long skirts along the floor was a source of pleasure.

Question 2 brought substantial returns. The fact to be established is the experience of a general change of personality. The experience is quite familiar. Putting on a light tie or a white vest will often cause a distinct sense of changed personality. The question takes up the effect of evening-dress and outing-costume. Only 10% of the answers claim that there is no effect.

Let me first give a few of the answers which plainly show the contrast of effects.

F., 21. In evening-dress I feel uncomfortable, gotten up for show; in an outing costume I enjoy a delightful sense of freedom.

F., 19. In evening-dress I feel unreal, like living in a different world; in an outing suit I feel exhilarated, free, younger, particularly glad to be alive.

F., 19. There is a slight change in my personality. I feel more dignified and grand and feel that all eyes are turned on me.

A social check of this kind—a desire to win emulation and the dread of criticism and notoriety—is responsible for the uneasiness expressed. Some of the answers speak of a tendency to pose. This shows social self-seeking in an interesting light.

Let us now turn to the change of personality in an outing costume.

1. *Sense of greater freedom of action, of movement.* The following expressions are used: unrestrained, stronger, impatient of restraint, more ready to talk, unconventional, ready for anything reckless, more natural.

2. *Rise in animal spirits.* The terms gay, jolly, joyous, etc., are used.

F., 18. I feel like running, jumping.
F., 18. I am boisterous, swing my arms.
F., 17. I feel Bohemian; like a tom-boy.
F., 24. Life seems to me worth living.
F., 19. I feel a rise in my animal spirits.

3. *Naturalness, self-forgetfulness.*

F., 20. I am more natural and able to think and act as I please.
F., 18. I forget all about myself.

4. *A sense of a different and more primitive level of personal responsibility.* This fact of having an "I don't care" feeling, of being "less dignified and prim," less responsible, is touched

on only casually in the answers. Two converging lines of explanation of such a state of mind are possible. One is that an outing suit with all its associative setting carries less of social decorum with it, and allows a resiliency of spirits which the ordinary social checks make impossible. In other words there is a let-up in social self-seeking, the whole matter being, as in the case of masks, a lapse to a more primitive state of existence when — rather elaborate ceremonies apart — there was less minute social regulation. Think of all our modern restrictions and refinements of modesty!

The approach from the side of social checks is, however, not the only legitimate one. The lessening of the sense of responsibility may be explained in other than purely social terms. There is a slackening of self-restraint quite independent of social sanctions. We may use as our point of departure Lamb's happy suggestion that much of the æsthetic enjoyment of comedy is due to the chance given the spectator to throw off the burden of his moral consciousness. There is no doubt that all our higher life, even if we take higher merely in the sense of more complex and elaborate,—is built on some subordination and regulation of the more primitive impulses. Even the most schematic purposeful activity implies that. For instance, what we call love with its idealizing factors, emotional overtones and sympathetic resonance is possible only at the expense of the limitless assertion of sexual impulses. At present the consciousness of the normal socialized and moralized individual represents such a system of checks and counterchecks among the impulses. The regulation machinery is the result of ages of inner conflict. To the degree to which this means not an extinction of the primitive impulse, but merely a narrowing of its sphere (as in the animal appetites of the normal man), to that degree will the regulation at times become irksome. At such times the effort is felt distinctly. This dualism is especially characteristic of our moral consciousness. There are times when we feel the burden of it all and long for a state prior to self-regulation. Excitement, emotionalism, more or less purposeless motor activity all favor the breaking loose of an impulse. In comedy, at least in its older Bacchanalian form, and in our modern farce we have just such a more primitive stratum: license, ribaldry, the unchecked appeal to animal spirits, a topsy-turvy world. In carnival crowds we have the same thing. There is an aimless, reckless rushing about;—characteristic is the swooping down of a crowd of merrymakers upon a serious-minded passer-by and the whirling him along.

Before discussing the phase of this phenomenon most important to the subject in hand, we must insist on one characteristic.

It is largely a contrast-effect, *i. e.*, the consciousness of having given the slip to social or personal standards is presupposed. It is of the nature of a lapse. Much, for example, of what we call the joy of living is the throwing off the burden of civilization. It is interesting to note the interrelation of primary and secondary feelings in the peculiar experience we sometimes get after a warm bath: a luxuriating in bodily sensations, a massive sense of physical well-being, a consciousness of relaxation and expansion which the German phrase "die Glieder lösen" hits off pretty well, and a sensual delight in one's body as body. The lapse-character of the experience is largely responsible for such feelings. Very significant is the fact of moral disapproval passed on such experiences by a developing moral consciousness. This is hinted at in the answers to question 15 which object to very loose clothing. This moral overtone may be found in one's own experience. It seems to me one of the most striking of all the vagaries of consciousness, that letting oneself go physically should be connected with the morally undesirable, and that what is bracing to the body should connote a moral getting oneself together. Loose negligé costumes, wrappers, soft, yielding slippers, slouch hats carry with them, at times only, a faint suggestion of moral slackness. On the other hand, shoes tolerably stiff, snugly fitting clothes or gloves, stays of some kind at times suggest moral terseness and firmness. The social check factor is present but subordinate to the self-respect factor. One further suggestion must be offered. The moral judgment passed is not generally passed on the natural as such, but rather on the slackening of regulation; it involves the suspicion that a state of sensuous relaxation may, if unchecked, easily develop into "raffinements" of the emotional or sensual type. Luxury in clothes is condemned on the same ground.

Let us now return to the question of lapse. The phenomenon is not, of course, evident if putting on an outing costume means merely going through a routine of daily exercise. But if it means romping about, shouting, spontaneous exercise of muscles, the characteristic emotional relief phenomenon sets in. In some cases consciousness is very complex. There is a delicious feeling about tripping up one's usual sober self ("How shocking it is! I wonder whether I shall have the courage to do it"). There is a blending of the familiar and the unfamiliar, the shrinking and the daring. It is like exploring a new domain for the self. We sometimes experience an impulse to do something shocking, to laugh out loud in church, for instance. That is an insurrection against conventional restriction. Or we like to shock ourselves. That is an insurrection against the regulation of single impulses. The suggestions of an out-

ing costume,—free movements, spontaneous rather than strictly purposeful activity, etc., are all in that direction. Just as changes in clothes may facilitate such a lapse, so they may become steadying forces. This is true of the soldier's uniform. *Esprit de corps* grows up in connection with the thought of membership. It deepens a man's sense of his duties.

Group III. Effects on the Self as a Social Reflex Phenomenon.

This can hardly be separated from Group 2. Some changes in self-feelings, however, are more readily interpreted as reflex phenomena of social intercourse, and it is with these that we are to deal.

Question 8 clearly brings out the fact that children are not normally conscious of their clothes and that any such consciousness is the result of remarks on the part of their elders. But such sensitiveness to the estimates of our fellows is brought out in a much more striking way in Question 1.

1. *As to being well-dressed:* It is hard to choose from the wealth of answers. The following is a rough grouping.

a. *Greater sociability:*

F., 20. I mingle more freely with others.

This manifests itself (1) as ease, rise in spirits, and (2) as the consciousness of a free and equal footing with others.

F.,20. I have a feeling of equality.
F., 19. I feel able to meet any person.

b. *A feeling of being under social surveillance and of having met its demands successfully.*

F. 18., When well-dressed I am more careful of my speech and manners.

This also appears in such phrases as "walk straight and stiff;" "like to be seen." As a result we have a heightened sense of power and worth.

c. *Sense of power:*

F., 18. I feel as if I could face the world.
F., 28. I feel equal to meeting any one.
F., 22. I feel at my best.
F., 18. I feel able to cope with any situation.

d. *Sense of worth:* This is closely connected with the sense of power as is attested to in the basing of social regeneration on such species of control as property and work.

F., 17. I feel worth more.
F., 18. I have more respect for myself.

Interesting are the moral connotations.

F., 19. I feel somewhat morally better.

This moral or quasi-moral significance, due to the individual working over of social standards, is more striking in case of being ill-dressed. Note the feeling of shame attaching to a breach of etiquette.

2. *As to being ill-dressed:*

a. *Unsociableness.*

F., 18. I do not like to have anybody see me.

b. *Unpleasant feelings:* depressed, distressed, cross, disagreeable.

c. *Self-Consciousness:* uncomfortable, conspicuous, nervous, fidgety, bashful.

F., 21. I must constantly tug at my clothes.

d. *Excessive sensitiveness to possible observation :*

F., 19. I am afraid of being laughed at.
F., 18. I am afraid people will think less of me.

e. *Comparison with others; envy:*

E., 19. I feel as though somebody else were better dressed.

f. *Lowering of one's self-esteem; loss of confidence in oneself:*

F., 18. My opinion of myself takes a decided drop.

It needs no argument to show that all such states are socially grounded, to be explained in terms of self-seeking.

Question 1. Shabby shoes and gloves: That we are particularly conscious of hands and feet has already been noted (mobile; frequently cross line of vision). There is a diffusive quality attaching to shabby shoes or gloves.

F., 17. I feel as though everything were shabby.
F., 18. Shabby gloves are as bad as a shabby dress.

But in addition there is the dread of unfavorable comment.

F., 19. I imagine I shall be criticised.

Hence there is a tendency to "hide one's hands," to "keep them out of sight."

Question 4 brings out this fact even more strongly. The topic is hidden defects in clothing. Most of the girls acknowledge a difference, and may be grouped as follows:

1. *Such as are conscious of a possible exposure and a resultant social disapproval.* This is by far the largest group, and reveals in an almost pathetic way the degree to which our worth estimate of ourselves is dependent on the general social currency. This seems to be especially true of women.

F., 17. I imagine somebody will surely see or find it out.
F., 19. What would people think if I were taken to a hospital?
F., 19. Something might happen and somebody might see it.

The dread of exposure through accident is especially strong. There result a centered attention, a haunting feeling.

F., 18. I imagine every eye directed to the spot.
F., 17. I feel as though eyes were piercing through and noticing it.
F., 18. I feel like touching it.
F., 19. I am always thinking about it.

This standing out in consciousness may reach very annoying proportions. Such experiences are common and easily verified.

In some cases there is a craving to expose the defect.

F., 17. I feel guilty, and desire to expose it.

This may be plausibly explained in view of other similar phenomena as an over-anxiousness to defend oneself, and thus to break by anticipation the force of possible adverse criticism.

2. *Guilt, loss of self-respect, moral self-judgment.*

Even here the social reflex factor enters in the guise of the thought of raising expectations one is not prepared to fulfill.

F., 18. I feel deceitful.
F., 21. If my underwear is soiled I have a feeling as if I were dishonest.

In the following example the self-reference factor is supreme.

F., 19. I had a certain garment which was somewhat soiled and worn. The thought came to me while I was helping alter it that it would be wrong to wear it after its being turned. I could never bring myself to the idea that it was right, and I have finally given up wearing it.

Question 9 shows us a very closely related phenomenon, the passing rather than the accepting of judgments.

F., 19. As a rule I like people better when they are well-dressed.
F., 19. I often form hasty opinions about dress.
F., 21. I judge character by the style of apparel.
F., 19. Clothes affect my first impression.

There is scarcely a dissent from this general opinion. Still two modifying factors are brought out.

1. The manner of putting on the dress, neatness, taste count more than the material.

F., 21 Quality does not affect me; the judgment rests on the people's manner.
F., 17. Only when loud, untidy or exceptionally careless.

2. Such judgments are generally passed on strangers. They are based on first impressions; and do not affect people we know well.

F., 18. Yes, when I first met them, but not after that.

Questions 14 and 6 belong in this connection, for the wearing of ornaments is a form of social self-seeking. Question 14 relates to the wearing of ornaments.

Of the answers 14 state unreservedly that they like ornaments. They are pretty, pleasing to the eye, etc. 19 do not

care for ornaments. Some would limit ornaments to special occasions. About 40 insist on simplicity.

F., 18. Jewelry should not be worn as if for public advertisement.
F., 19. Too many ornaments show lack of good taste.
F., 18. It spoils the effect of dress to have too much lace and ribbons.

Now these answers seem at first glance to show the very opposite of social self-seeking. Contrast them with the delight of the savage in beads, trinkets, ribbons. Think of the ridiculous expressions of the ornamental enumerated in Frobenius' Flegeljahre der Menschheit. Ornament represents a means of self-assertion and distinction. Certain negro chieftains have the privilege of wearing a lion or panther skin. Ornament is also a visible expression of wealth. Stanley tells us of a negro king who had his wives carry around their necks metal rings weighing from 40 to 80 pounds.

How account for the character of the answers in view of such strong social forces, emulation, pride, vanity, etc. The delight in ornament still exists in full force among the uneducated and the frivolous. In the answers such social self-seeking is checked by secondary factors of social self-seeking.

1. Jewelry resists incorporation in the self more strongly than do clothes. This applies also to trimmings, cuffs, collars.

2. Even clothes are felt to be insufficient means of self-assertion. Such assertion lacks permanence. Substantial interests are sought, and man turns savagely against decking himself with trinkets. Excessive adornment now acquires the flavor of vulgarity; it is too much like carrying one's personality to market.

3. Dread of being conspicuous:

a. Often this is nothing but the excessive shyness and self-consciousness of adolescence.

b. In most cases it means the creating of new social demands.

The desire to avoid the unfavorable comment of freakishness, outlandishness is very strong. The desire for uniformity, at least with one's group, checks the desire of standing apart. The country lad satisfies this craving for distinction by wearing flashy colors, etc. It is his attempt to set himself above his class. A man cannot help playing to certain groups. But the man who seeks distinction in the way instanced soon finds that his differentiation from his class throws him together with the upstarts, "sports," frauds. It is the instinctive recoil from such a possibility which accounts for dislike of excess of jewelry and of imitations. All answers which insist on the vulgarity of the thing express this.

Then we see played a game of shuttlecock and battledore between the principles of uniformity and differentiation.

4. Acknowledgment of the authority of certain social regulations even in matters of dress.

This involves the growth of a group-consciousness far above the mere huddling together kind. This is seen best of all in the evening dress for men with its socially prescribed rigid uniformity. The same motive is a work in the impersonal form of certain social courtesies, formal invitations in the third person. A sentiment of voluntary submission to group-standards has grown up.

Question 6 discusses imitation things of all sorts. 66% of the answers express dislike of imitations of all kinds. They are said to awaken disgust, contempt.

In some cases a difference in degree is to be noted between disapproval of imitation jewelry and lace.

About 25% disapprove of jewelry but not of lace or other imitation things.

F., 18. Imitation lace is all right; imitation jewelry suggests commonness.

F., 18. Imitation jewelry I cannot bear; imitation laces are often so beautiful that their beauty excuses them.

Let us now return to those who express utter condemnation. The reasons they give fall under two heads:

1. *Imitations suggest commonness, poor taste, vulgarity.*

F., 20. It shows poor taste to wear them.

F., 20. I feel cheap and tawdry if forced to wear imitation things.

2. *They raise false expectations; suggest deceit, dishonesty.*

F., 18. To wear imitation jewelry is like telling an outright lie.

F., 18. I feel hypocritical.

F., 17. I dislike to wear them. They falsely make people believe what they are not.

Question 15, which treats of the "lies of clothing," may be discussed here.

The answers range from reserved justification to utter contempt. Padding is justified as follows:

F., 19. It is all right; it is a person's duty to look as well as possible.

F., 18. Padding is permissible to hide some marked physical defect.

Often, however, there is a moral disapproval, closely akin to that of imitation things.

F., 19. Padding one's figure and tight skirts are immoral. A woman that pads is disgusting.

F., 20. A person should be honest in dress as well as in everything else.

F., 22. Padding is an act of deception.

Evidently raising false expectations, attempting to impress people, etc., are considered immoral. It is this fact that under-

lies our aversion to imitation jewelry; otherwise we should look with the same disfavor upon imitation studs or hat-pins with false stones as we do upon jewelry meant to impress.

Questions 5 and 10 touch on the very interesting subject of fashion.

Question 5 brings out the fact that fit and style owe their imperativeness to social demands. Most of the girls are particular about both.

Dread of being conspicuous is the chief factor. It insures a general conformity to style and checks the following of extremes of fashion.

F., 28. I do not like to be conspicuous by being out of style.
F., 19. I am very particular about style, otherwise I think I am attracting attention.
F., 18. I always detest wearing anything the very latest.
F., 20. Yes, but not conspicuous styles.

Question 10 touches on the indulgence of individual preferences at the expense of style. Over half of the number state that they do not indulge such preferences, while with the vast majority of the others such preferences turn rather on subordinate things, such as ribbons, color of dress, etc.

F., 21. As fashion changes, I change also.
F., 19. I never indulge any preferences contrary to style.
F., 18. I don't like the latest sleeve but I had it put on.

While many acknowledge (13, Dress-reforms) that fashions change too often; group-judgment, as a rule, proves too strong and often seriously interferes with æsthetic judgments. Occasionally we find a note of independence:

F., 19. My motto is: "If the style is becoming, wear it," rather than "Anything as long as it is the style."

The important factors are imitation, social corroboration of tastes, craving for newness. These are quite as important as those suggested by v. Jhering whose philosophy of fashion is stated in terms of an attempted self-differentiation of the upper classes.

III.

It is, perhaps, hardly serviceable to sum up and draw conclusions from what are frankly acknowledged to be suggestions of an unsystematic kind, based on very limited material. Attention has at least been drawn to two factors in the far-reaching effect of clothes on the mental life.

1. *Simple:* such as any ordinary psychology must take account of.
2. *Complex:* (a) such as are found in subtle personal reac-

tions; (b) such as are found in the operation of standards of group-judgment.

This study may be supplemented in many ways, and it is my purpose to outline very briefly what is needed towards such supplementation and to suggest several problems of a very promising kind.

1. Simple psychological experiments with a view towards ascertaining the sense-factors in the psychological effects of clothes.

2. A study of more complex factors, such as emotional displacements, æsthetic judgments, changes in personality.

3. Studies in abnormal psychology with a view towards connecting any changes in the clothes-consciousness with the well-known insane delusions in the body-consciousness.

4. A study of sex-differences. This should prove one of the most fruitful lines of investigation.

5. A study of differences due to age, station, interests, etc. A questionnaire like the one discussed does not give the whole story. Generalizations would be one-sided. On the other hand the peculiar part clothes play in the consciousness of actors or tailors or uniformed officials should be noted and investigated. At this point attention might be drawn to the investigation of clothes as steadying forces or regenerative agencies of a social kind, as in reform schools or as facilitating social organization (badges, insignia, uniforms).

6. A study of clothes from the point of view of social psychology. This would mean an exhaustive analysis of group-estimates, group-standards, etc.

7. An account of social symbolism in dress and its relation to emotional states. This would mean a discussion of membership insignia, national costumes, characteristic colors and styles, mourning and bridal costumes, professional cuts, etc. Valuable hints have been thrown out on these points by H. Schurtz, Urgeschichte der Kultur.

8. An anthropological account of dress and ornament (*cf.* H. Schurtz, Grundzüge einer Philosophie der Tracht).

9. An adequate historico-psychological account of costumes, fashion, etc.

10. A genetic account of clothing with the view towards a genetic theory. The latter can be done only on the basis of a vast array of materials, but should prove very valuable, since it in turn would give us the key to many curious facts.

It is for the purpose of stimulating an investigation of the many problems instanced that these suggestions on the very complex interplay of psychological effects of clothing are set forth.

The following bibliography though not used in the preparation of the foregoing paper has been added by Dr. Theodate L. Smith, at the author's request, for the use of those interested in the historical development of the subject.

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IMAGINATIVE ELEMENTS IN THE WRITTEN WORK OF SCHOOL CHILDREN.

By S. S. Colvin and I. F. Meyer, University of Illinois.

Several years ago a large number of compositions written by school children were collected by the Department of Psychology of the University of Illinois. These were secured in response to the following circular letter addressed to superintendents and principals of various schools in the State of Illinois:

Dear Sir:

I wish to find out some of the principal interests of children as shown in their regular written work in school and take the liberty of soliciting your assistance in collecting material for that purpose. I desire to get compositions from each of the pupils (as far as possible) of the four upper grades of the grammar school, and of all the grades of the high school, in your town. It is important for the purposes of the study that these compositions should be prepared as a part of the regular work of the pupils and that they should not be revised or corrected by the pupils after the papers have been submitted to the teacher. The pupils from the grades are to select one of the following subjects from which to write:

A Funny Story I Have Read or Heard.
What I See on My Way to School.
The Story of a Poor Boy or Girl.
How the Flowers were Colored.
A Fairy Story.
A Good Joke.

The subjects from which the high school pupils are to select one are as follows:

A Voyage in an Air-Ship in the Year 2000.
How the Flowers Got their Colors.
What I can See with My Eyes Shut.
My First Visit to the Theatre.
Adventures of a School Desk.
Displays in the Shop Windows.
A Laughable Story.
A Poor Family.
A Fairy Story.
A Comical Character.
The Woods in Autumn.
Jokes I Have Played.

I desire the work to be entirely spontaneous and original, with no suggestion as to content or method of treatment, and particularly with no hint on the part of the teacher or parent as to choice of subject. Each paper should have the full name of the pupil, the age and grade. Thanking you in advance for your assistance in the matter, I am,

Very truly yours,
STEPHEN S. COLVIN.

Later 3,000 of these compositions were studied and the results were expressed in the form of tables and curves. The object of the investigation was to obtain data on the growth of the imagination in school children, and its relation to other elements in their mental life. A record was made of the visual, auditory, tactile, pain, olfactory, gustatory, organic and muscular images among the more simple forms of imagination, while the more complex types were studied under the heads of Scientific, Fairy Story, Nature Myth, Heroic, Dramatic, Religious and Melancholic images.

The first eight types are self-explanatory. The remainder require further comment. Under scientific imagination were considered those images which related to invention, discovery, the construction of machines and devices and the uses of electrical and other natural forces. The fairy story and nature myth concerned that class of imagery which had to do with elves, pixies, gnomes, goblins, etc., and with the mythopoeic fancies common to primitive races and to children. Under the heroic were considered those images which related to ideas of magnanimity, self-forgetfulness, courage and devotion; under the dramatic, striking situations, stirring events and climaxes; under the religious, the supernatural and the devotional; under the melancholic, feelings of sadness and depression. These latter categories were not arranged with any attempt at exact logical sequence. They were rather selected because of the relative prominence or importance of these elements in the compositions studied, and because of their bearing on the known fact of the mental growth of children.

The grading of the various papers under the categories described above offered a difficulty at the outset. An exact grading was manifestly impracticable. To have attempted to indicate in per cent. the absolute value of any of the imaginative elements found in a composition would have been little less than absurd. To say, for example, that one composition contained fifty per cent. of visual, another thirty per cent. of auditory, or a third ten per cent. of mythopoeic images would be to indicate an impossible exactness. On the other hand, it was not found difficult by dividing the compositions into six grades of excellence, to judge with considerable nicety the class into which each should fall for any given element. After some practice facility was gained in judging whether a composition, for example, belonged in the fourth grade for visual imagination, in the third for tactile, in the fifth for dramatic imagery, and so on. Those compositions which contained the lowest amount (quantity and quality both considered) of a type of imagination were put in the first grade for that type, those containing the highest, in the sixth grade; while other degrees of excel-

lence were tabulated between these extremes. In the actual working out of the study it happened that compositions that showed a lack of merit in respect to a particular type of imagination fell in one of the first three grades, while in the three higher grades fell those compositions whose merits in respect to a type were more positive than negative. Each category was graded on the same general scale in order to give a basis of comparison between the various types.

In connection with the study of these types of images a tabulation of the formal correctness, the humor, the feeling and the logical arrangement was made in a similar way. The results thus secured show several interesting and apparently significant facts.

The curves for visual, auditory, tactile and motor types of imagination ran much higher than did the pain, gustatory, organic and olfactory. As would be expected the visual on the whole stood the highest for both sexes, though the auditory was a close second and the motor and tactile not greatly inferior. The averages in grades for the entire eight years being as follows: Visual, boys, 4.84; girls, 4.81. Auditory, boys, 4.10; girls, 4.56. Muscular, boys, 4.06; girls, 3.67. Tactile, boys, 3.50; girls, 3.66.

The curves representing the pain, gustatory, organic and olfactory types ran much lower as above stated, and showed no such approximation as did those of the four higher types. The per cents. for these lower forms were as follows:

Pain, boys, 1.74; girls, 2.04. Gustatory, boys, .82; girls, 81. Organic, boys, .54; girls, 84. Olfactory, boys, .096; girls, .080.

The most striking feature of the curves representing the first four types of imagination is the marked decline at about the onset of puberty with the single exception of the visual type, which shows a steady rise for both boys and girls through the entire eight years studied. This fall, though in a less degree, is likewise to be noted in the four lower types, with the exception of the olfactory, which, however, runs so low for all the years that it may be practically ignored. In the case of the higher types there is a partial recovery during the high school years, but in the case of the lower types the decline continues without recovery. The same general tendency of the curve to fall at the beginning of the adolescent years, is further to be noted in the fairy story, nature myth, heroic, dramatic, and religious types of imagination. The scientific type, particularly with the boys, and the melancholic, which hardly exists before the adolescent years, alone show a rise. Thus it is seen that out of the fifteen varieties of imagination dealt with in the study all but four show the fall at about the beginning of adolescence and of the four that show an opposite or neutral tendency, one,

the olfactory, is so slight for all grades as to be of little importance in the tabulation. The cause of this falling off is in part to be explained, I believe, by the general upheaval that accompanies the onset of puberty. The low grade stability of the preceding years is broken up. Old brain centres cease to function, or at least function not actively or function in different directions. Thus images fade and may die out, or are replaced, as the adolescent years progress and renewed stability comes, by others. The visual escapes this tendency because it is not so deeply centered in the affective being of the child, which suffers the greatest upheaval. It is more intellectual and less vital. It is in a sense formal and external; it is an interesting fact that the curves for formal correctness and for visual imagination run practically parallel for the boys and nearly so for the girls during the entire eight years under consideration. This probably means that the visual imagery has become devitalized and symbolic. It is a significant fact for education to consider.

Another cause that may be operative in the fall of the curves is the increased reticence of expression which comes in early adolescence, especially in connection with the inhibiting influence of school discipline and environment, to spontaneity. As far as these latter causes hold good the results obtained in the present study would show rather the imaginative elements in the school work than in the mind of the child as such. Since, however, the enquiry was primarily directed to the conditions of imagination in the school the facts sought are not obscured by this circumstance.

The explanation for the rise of the curve of scientific imagery is to be found in the immense interest that the American boy in particular takes in all forms of invention and discovery. This is so strong that it overcomes the tendency, potent for the most part, toward the disintegration of the image at the onset of puberty.

A further study of the curves reveals the fact that the visual type of imagination begins considerably higher for the girls than it does for the boys, but that its growth is much more rapid in the grades for the boys. In the high school the two curves are practically identical. The most rapid rise is at puberty when the average age of the boys was 14.77 years and the girls 14.56.

The auditory type shows a very close parallel for both sexes, but is with the girls considerably higher during the entire period studied, the average grade for the eight years being boys 4.10 and girls 4.56. For both boys and girls there is a very gradual increase in the fifth and sixth grades, with rapid accentuation in the seventh, a slight growth in the eighth, a great falling

off in the first year of the high school, with a rapid subsequent recovery and a sharp rise at the end. The decline at about the fourteenth year is to be accounted for, probably, in accordance with the general explanation offered on a previous page, the growth from the fifteenth to the eighteenth years is in accord with the awakening consciousness at adolescence. Since auditory images are closely connected with the sentiments the curve rises and falls in accordance with the fundamental changes in the child. Musical sounds in particular and the cadence of the human voice are potent influences in the life of the adolescent in his early teens. Sounds of nature, too, have a deeper meaning, and, as Dr. Hall expresses it "speak a language to the heart."

The curve for the tactile image is at its maximum for both sexes at about the onset of puberty. It then falls very markedly, and recovers but slightly during the high school years. The boys' average in the grades is .39 higher than in the high school. The fact that the tactile image decreases in the high school is in agreement with experiments performed by Weber and Mano. Weber found tactile sensation to decrease with growth.

The motor images reach their highest point for both sexes in the eighth grade where the average is 4.54 for the boys and 4.42 for the girls; in the ninth they fall very markedly, reaching 3.71 for the boys and 3.38 for the girls. In the second year of the high school the boys show a decided recovery and a return in the last year to a point not much below the average for the grades, with the girls on the other hand the curve sinks still lower in the second year and recovers but slightly in the last two years. Through the grades the boys find this their most powerful form of imagery. The average for the girls in the grades is also high. The marked fall of the curve particularly in the cases of the girls, is entirely in harmony with the physiological and psychical changes at the onset of puberty. The languor and day-dreaming attending early adolescence is little conducive to the development of motor images.

Pain images, while running much lower than any of the four types mentioned above, are comparatively high, the average grade for the entire eight years being 2.04 for the boys and 2.21 for the girls. The curves for both sexes show close similarities. There is a marked fall at puberty and a slow decline thereafter for the boys, for the girls there is a slight tendency to rise during the last year of school. This is in accordance with a number of previous studies, which go to show that sensibility to pain diminishes for both sexes as age increases. There is also a natural reticence to expression of pain,

especially among boys as they approach adult life, it being considered unmanly to show that pain is felt. There is reason to suppose that with the onset of menstruation, one type of pain imagery increases, and this should tend to make the curve rise in girls; this tendency, however, is checked in expression by the opposite one of diffidence, and doubtless has its effect in cutting down pain images in the written work in the school.

The curve for the gustatory images runs considerably lower than does that for pain, and shows a continuous fall from the sixth grade for both sexes. The curves are practically parallel throughout their entire course, that for the girls remaining higher than that for the boys. The average grade for the boys during the four years in the grades is 1.38; for the high school .82 For the girls the corresponding grades are 1.67 and 1.08 respectively. It is natural there should be a diminution of these images as the child passes out of the mere vegetative self. That they preponderate more in the girls than in the boys is largely to be explained, I believe, by the fact that woman is nearer the race; she approximates more closely to the fundamental type; she is less specialized and is nearer the primitive biological norm.

The term organic type of imagination is here used as referring to images in connection with internal bodily changes. It runs somewhat lower than the gustatory, but follows a course very similar. It is considerably higher for the girls than for the boys, a circumstance which may be possibly explained by the fact that the affective processes in girls are more intense than in boys. The fact that it is lower in the high school than in the grades is to be accounted for possibly on the ground that the strong emotions of adolescence, and the organic changes accompanying them, do not readily find expression, while in the pre-adolescent stage the more simple emotions do find such expression.

The olfactory images run very low throughout the entire eight years studied. There is in the case of the boys, however, a positive increase after puberty, which may be in part accounted for when we consider the close connection between odors and æsthetic emotion and also the sex life. The fact that olfactory images in the case of the girls seem stronger before puberty than afterwards may be explained to an extent by the circumstance that odors and tastes are almost indistinguishably connected, and since the girls show a more marked gustatory preference, it would be natural that they should show an olfoctory preference as well. The fact that the smell images fall off in the case of the girls just at the onset of puberty may be explained by the breaking up of the old nutritive self, while the partial recovery in the last two years of the high school may

mean that smell images have come to have for the girls, as well as for the boys, an æsthetic and a sexual, rather than a mere nutritive, value.

Highest in grade among the more complex forms of imagination comes the heroic. It stands the highest for the boys in the earlier years and the later years studied, while during the last years of the grades and the first years of the high school it shows a decided decline, being at the lowest when the average age for the boys is 14.77 years. With the girls there is a steady development with only a slight fall during the first year of the high school course. For both boys and girls it seems to be a more constant form of imagination than many others, and one that stands the shock at the onset of puberty better. The average for the boys in the grades is 1.19, for the girls 1.20. In the high school the figures are 1.11 and 1.41 respectively. For the dramatic imagination the figures are somewhat similar, though slightly lower; the girls here showing a more marked superiority over the boys than in the heroic. This may be accounted for largely by the greater intensity in girls of those feelings which centre around these two types of imagination. In this connection may be mentioned the study of Dr. Edwin G. Dexter[1] in which he shows that on the stage public recognition comes much earlier for women than for men.

The curve representing the growth of the scientific imgination shows a rise for both sexes during the first year in the high school. The average is much higher for the boys than for the girls. In the case of the former, it is for the grades .56 and the latter .32. The corresponding figures for the four years of the high school are 1.86 and .68. The highest point for the boys and for the girls alike is reached in the last year of the high school when it is 2.70 for the boys and .89 for the girls.

The mythopoeic imagination, represented by the fairy story and by the nature myth, found its greatest expression in the compositions written in the grades. The average for the fairy story in the grades is, boys, .665; girls, .930. In the high school it is, boys, .185; girls, .620. The average for the nature myth in the grades is boys, .395; girls, .570. In the high school the figures are, boys, .160; girls, .270. These figures clearly show that this type of imagination tends to disappear as the age of the pupil advances.

The curve representing the religious imagination is at its highest in the fifth grade for both boys and girls. In the case of the boys it falls off rapidly in the last two years of the grades and sinks to a still lower point in the high school. With the girls there is a general tendency to fall, though it is

[1] Age and Eminence, Pop. Sci. Mo., April, 1904.

not so pronounced. In the face of the well known facts in regard to the religious emotions at adolescence as set forth by President Hall, Starbuck, James and others this decline means not that the high school pupil is lacking in religious emotions, but that the school environment is hostile to the expression of such feelings. The fact that there is a greater expression of such images in the grades than in the high school is to be interpreted as showing that the earlier expressions are for the most part conventional, and have not the genuineness of those feelings that belong to the adolescent ferment. The youth hesitates in an unfriendly atmosphere to express his deeper feelings, yet there should be no barrier to such expression.

Melancholia does not belong to the pre-adolescent period. In the grades such images are practically absent for both sexes. In the high school they begin to manifest themselves, and are greater (more than double) in the case of the girls. Doubtless the compositions studied reveal but to a slight extent the actual intensity of the melancholic moods in both sexes. A natural diffidence, as in the case of the religious imagination, forbids its full expression in the work of the high school.

As would be expected the formal correctness of the themes improved throughout the eight years in the compositions studied, being at its highest during the last year of the high school for both sexes. There is a close correspondence between this curve and that of the visual imagination especially in the case of the girls. This may point to the fact that good visualizers have a decided advantage in the mechanical work of composition over others whose images come more largely from other fields. This, too, bears out what has been said in regard to the more formal nature of the visual type. There seems to be much less relationship between formal correctness and other types of imagery.

Logical power, like formal correctness, develops throughout the school course in the case of the girls and the curve is quite similar to that of formal correctness. This is less true in the case of the boys. Indeed, for some reason, there is an actual falling off in the last two years of the high school. This, however, must be due to some non-essential cause, and can have no fundamental significance. Logical power shows no pronounced relation to any type of imagination except the visual.

The sense of humor of both boys and girls is of a relatively low grade. The curve runs much higher for the boys than for the girls, and reaches its maximum in the seventh grade.[1] It falls decidedly for the boys in the first year of the high school course

[1] This is in entire accord with previous studies on the sense of humor made by the writer.

and slightly for the girls. There is considerable resemblance in the curve for the boys between pain images and humor. A connection here may be found in the fact that the type of humor manifested by the boys is largely of the teasing and bullying variety. The curve for the organic images also shows resemblance to the curve for humor, as does further the curve for motor images. There seems to be no clear relation between humor and the other types of imagination.

The curve representing the course of feeling runs high for both sexes and shows a constant growth. It is higher for the girls than for the boys. As might be expected there is a resemblance between the curves for feeling and for the heroic and dramatic imagery. Although the growth is constant it is not rapid. The average for the grades is: boys, 4.13; girls, 4.33. For the high school the corresponding figures are: boys, 4.58; girls, 4.78. Between the first and last years of the high school the growth for the boy is only .17 and for the girls .33. These figures would hardly suggest the great awakening in emotional life which comes at this time, particularly when it is further known that during the four years studied in the grades the increase for the boys is .36 and for the girls .49. Evidently the repressive influence of the school environment is showing itself here.

The results obtained by the study point to certain conclusions important for education to consider. These may be stated as follows:

I. In general the imagination of school children shows a decline during the years studied. This decline may be in part only seemingly such, as in the case of the religious imagination, and may be due in a degree to an increasing reluctance of the youth to give expression to his more vital experiences.

II. Whether this decline is actual or only seeming (confined to the work of the school) it is apparent that our present system of education does little to cultivate the imagination. Indeed it must in many instances exercise a negative influence. It tends possibly in some instances to crush out the imaginative powers.

III. The only type of imagination that shows a substantial growth is the visual, and this type has doubtless become symbolic, and is devitalized. Thus, again, it is shown that our school education tends toward the mechanical and formal, rather than toward the spontaneous and vital.

IV. At the onset of puberty there is a tendency for the neurones to become disassociated and for the old images to drop out. Previous forms of imagination disappear, especially those types which belong to the "lower self." With the reconstruction of the psychic life, come the "higher" types of

imagination. Here is the opportunity of the schools to appeal to the deep fundamental elements of child nature, — an opportunity sadly neglected for the most part.

V. There seems to be but little place for humor in the school work. The cruder types are the only ones that find expression to any considerable extent. This is shown by the fact that with the lessening of the pain, tactile, and organic images, there is a corresponding decline in the humorous elements in the compositions studied. The school offers no encouragement to the development of a higher sense of humor, thus ignoring one of the most vital phases of human experience.

VI. The great growth in feeling during the high school years evinces itself by a slight rise of the curve during this period ; the rise, however, cannot to any degree represent the actual growth in the affective life ; and this again indicates the repressive influence of the school work on the emotional elements of conciousness.

VII. The above may be summed up by the statement that the school puts a premium on mechanical exactness, formal expression, and rhetorical correctness. It ignores, or actually hinders, the expression of the deeper self. It educates only a part of the child.

SEX SELECTION OF MAJOR SUBJECTS UNDER THE ELECTIVE SYSTEM OF LELAND STANFORD, JR. UNIVERSITY.

By E. I. Miller, State Normal School, Chico, California.

With the commencement of May, 1901, the tenth yearly session of Leland Stanford, Jr. University came to an end. This ten-year period is long enough to show some of the tendencies of the experiment of free election of studies now being tried at that institution. With the desire to see what tendencies were manifesting themselves this statistical study was begun some years since and is now completed for the decennial period 1891 to 1901.

At Leland Stanford, Jr. University the student has great freedom to choose all his subjects of study; but he is particularly free to choose his major subject or department. Perhaps there are few other universities in America where so much freedom is allowed, and there are no others, certainly, where fewer restrictions in this matter exist. The student just entering the university may say he wishes to make this, that, or the other subject his major work and it is so recorded. If later the student wishes to change his major subject, that is, change from one department to another as from physiology to zoölogy or the reverse, or from history to any language or to any science or the reverse, or in fact to make any change, he may do so subject to the regulations as to quantity and kind of work required for graduation by the department newly chosen. Commonly such change may be made without any loss of time or credits save where the change is made late in the student's course and to a department widely differing in requirement from that in which the student previously worked. The major subject having been chosen the department exercises a certain control over the courses to be taken in that department and in the allied subjects or minors; but this control is frequently only nominal, the student being allowed to suit his own wishes.

So great freedom of choice being possible it is clear that exceptional facilities are afforded at this university for examination of sex selection of studies. What is it that determines the individual student in choosing a major subject? Doubtless there are many things that help decide this matter; among which are previous preparation, influence of friends, reputation

of certain departments, anticipated use for the work after completion of the university career, force of precedents, natural likes and dislikes and so forth; but with the freedom of choice at entrance to the university and the facilities for changing from one department to another it is evident that at the time of graduation students are taking degrees from departments of which they have made selection, and that they have made this selection under influences as little artificial as possible with the existing status of sex relations—entirely inartificial as far as the environment of the university goes. This paper records the results of sex selections as observed at graduation. Such conclusions as may be reached cannot be absolutely, but only approximately, true; but they certainly show tendencies; and it is believed these tendencies suggest educational problems which are worthy of the most careful consideration.

It is the purpose of this paper to show how the graduates of the university are classified as to sex among the different departments, and, if possible, from such data, to suggest some inferences as to sex intellectual preferences and the possible power of such preferences to influence the course of education.

It is believed by many that the intellectual likes and dislikes of men and women are different. Some believe this is due to inherent sex qualities; others attribute it to environment and education. Although the figures accompanying this paper may give some data suitable to an examination of these beliefs it is *not* the purpose of this study to account for such difference if such difference exists, nor to make any comparison as to intellectual superiority. The terms intellectual likes and dislikes and intellectual preferences are used here with no intention of adopting either of the above views, but simply as convenient terms for use.

In pursuing the purpose above indicated over the period stated at the beginning of this paper, it was found desirable to exclude the classes of 1892 and 1893. The reasons for this are first, because these classes were very small; second, as the university did not open until the fall of 1891 the members of these classes entered with advanced standing, on work done in other institutions, many of which did not permit the elective system; therefore those students were not so free to select their major subjects as if they had been at Stanford during the entire course, because the work already accomplished would not prepare them equally well for all departments at Stanford; in order to make the most of the work already done they must take the major best suited to their preparation; third, because as women are less roving than men, there were few women in these classes. For these reasons, then, the first two classes are

excluded from this study. To a certain degree these objections apply to the class of 1894; but because a large majority of the members had three years' work at Stanford this class is not excluded.

Even should their tastes tend toward law, geology, and engineering, few women are likely to enter those departments. The occupations to which those lead after leaving the university are at present such as to make them undesirable, if not impossible, fields of work for most women. And since the subjects are technical and prepare for particular fields only, this would tend to keep women from selecting them as major subjects. Therefore it seems fair to omit these departments from the study.

The following summaries show by departments and by graduating classes, first, the total number taking the Bachelor of Arts degree,[1] second, the per cent. of men and the per cent. of women taking the degree in each department. To illustrate, the class of 1896 has twenty-four graduates in the English department; of these, eight, or 33⅓%, are men, and sixteen, or 66⅔% are women. Again, the class of 1901 has six graduates from the department of Sociology and Economics; of these, all, or 100% are men, and no women. At the beginning of each summary is given the whole number in all departments, for that year, also the number and per cent. both men and women, taken separately, bear to the entire class. This is called the class percentage and is to be compared with the percentage in each department.

Summaries of Separate Classes.

Class of '94.[2] The women constitute 29.26% of the class, the men 70.74%, the numbers being 12 and 29 respectively.

The women are above their class percentage in Latin 66⅔%, Romance Languages 100%, English 33⅓, Education 33⅓%, History 33⅓%, Astronomy 100%, Chemistry 50%, and Physiology 33⅓%.

The women are below their class in Greek 0%, German 0%, Ethics 0%, Economics 0%, Botany 0%, and Zoölogy 0%. To illustrate, the women constitute 29.26% of the whole class, but in Latin they are 66⅔% of the graduates, and in Greek they are 0%; that is they are above their class percentage in Latin and below in Greek.

The men are above their class percentage in Greek 100%,

[1] The B. A. degree is the only one granted from any department for the first degree. Other higher degrees are granted only on more advanced work.

[2] Little or no stress is put upon the results for this year because of the small size and scattered condition of the class.

German 100%, Ethics, Economics 100%, Botany 100% and Zoölogy 100%.

The men are below their class percentage in Latin 33⅓%, Romance Languages 0%, English 66⅔, Education 66⅔%, History 66⅔%, Astronomy 0%, Chemistry 50%, and Physiology 66⅔%.

In other words the men are above their class percentage of the class in those subjects in which the women are below, and below in those subjects in which the women are above. This last statement is true for all the succeeding classes.

Class of '95.[1] The women constituted 36.13% of the class and the men 63.86%, the numbers being 43 and 76 respectively.

The women are above their class percentage in Latin 45.46%, German 37.5%, English 69.23%, Education 50%, Botany 75%, and Drawing and Painting 100%.

The women are below their class percentage in Greek 0%, History 5%, Economics 16⅔%, Mathematics 28.58%, Chemistry 10%, Physiology 33⅓%, Zoölogy 20%, and Physics 0%.

The men are above their class percentage in Greek 100%, History 95%, Economics 83⅓%, Mathematics 71.42%, Chemistry 90%, Physiology 66⅔%, Zoölogy 80%, and Physics 100%.

The men are below their class percentage in Latin 54.54%, German 62.5%, English 30.77%, Education 50%, Botany 25%, and Drawing and Painting 0%.

Class of '96.[2] The women constitute 36% of the class, and the men 64%, the numbers being 45 and 80 respectively.

The women are above their class percentage in Latin 75%, German 50%, Romance Languages 66⅔%, English 66⅔%, Ethics 100%, Education 66⅔%, Mathematics 60%, and Botany 60%.

The women are below their class percentage in Greek 33⅓%, Psychology 0%, History 14.29%, Economics 12.5%, Astronomy 0%, Physics 0%, Chemistry 22.23%, Entomology 0%, Physiology 15.78%, and Zoölogy 0%.

The men are above their class percentage in Greek 66⅔%, Psychology 100%, History 85.71%, Economics 87.5%, Astronomy 100%, Physics 100%, Chemistry 77.77%, Entomology 100%, Physiology 84.22%, Zoölogy 100%.

The men are below their class percentage in Latin 25%, German 50%, Romance Languages 33⅓%, English 33⅓%, Ethics 0%, Education 33⅓%, Mathematics 40%, and Botany 40%.

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[1] The class of '95 has represented in it the additional departments, Mathematics, Physics, and Drawing and Painting; but it has no graduates in Romance Languages, Ethics, and Astronomy.

[2] Drawing and Painting not represented. Psychology and Entomology are added.

Class of '97.[1] The women constitute 45.37% of the class, the men 54.65%, the numbers being 49 and 59 respectively.

The women are above their class percentage in Latin 63.64%, German 83⅓%, Romance Languages 100%, English 77.77%, and Drawing and Painting 100%.

The women are below their class percentage in Greek 0%, Education 37.5%, History 40%, Economics 7.69%, Mathematics 33⅓%, Physics 25%, Chemistry 0%, Entomology 0%, Physiology 28.57%, Zoölogy 0%, and Hygiene and Organic Training 0%.

The men are above their class percentage in Greek 100%, Education 62.5%, History 60%, Economics 92.31%, Mathematics 66⅔%, Physics 75%, Chemistry 100%, Entomology 100%, Physiology 71.43%, Zoölogy 100%, and Hygiene and Organic Training 100%.

The men are below their class percentage in Latin 36.36%, German 16⅔%, Romance Languages 0%, English 22.23%, and Drawing and Painting 0%.

Class of '98.[2] The women constitute 52.59%, and the men 47.41% of class, the numbers being 61 and 51 respectively.

The women are above their class percentage in Latin 90%, German 80%, Romance Languages 80%, English 76.19%, Botany 100%, and Entomology 100%.

The women are below their class percentage in Greek 20%, Education 50%, History 35.71%, Economics 0%, Mathematics 33⅓%, Physics 0%, Chemistry 25%, Physiology 41.67%, Zoölogy 50%, and Bionomics 33⅓%.

The men are above their class percentage in Greek 80%, Education 50%, History 64.29%, Economics 100%, Mathematics 66⅔%, Physics 100%, Chemistry 75%, Physiology 58.33%, Zoölogy 50%, and Bionomics 66⅔%.

The men are below their class percentage in Latin 10%, German 20%, Romance Languages 20%, English 23.81%, Botany 0%, Entomology 0%.

Class of '99.[3] The women constitute 47.59%, and the men 52.41% of the class, the numbers being 57 and 62 respectively.

The women are above their class percentage in Greek[4] 100%, Latin 75%, German 77.78%, Romance Languages 100%, Eng-

[1] The Astronomy department is discontinued. Psychology, Ethics, and Botany are not represented. Hygiene and Organic Training is added.

[2] Psychology, Ethics, Drawing and Painting, and Hygiene and Organic Training are not represented. Bionomics is added.

[3] Drawing and Painting, and Hygiene, and Organic Training are not represented. Classical Philology is added.

[4] Only one graduate and that a woman. Classical Philology having been added took men from Greek and thus changed sex predominance.

lish 73.92%, Psychology 100%, Education 50%, Mathematics 50%, Physics 50%, and Entomology 50%.

The women are below their class percentage in Classical Philology 0%, Ethics 0%, History 38.88%, Economics 0%, Chemistry 0%, Botany 28.57%, Physiology 46.67%, Zoölogy 0%, and Bionomics 0%.

The men are above their class percentage in Classical Philology 100%, Ethics 100%, History 61.12%, Economics 100%, Chemistry 100%, Botany 71.43%, Physiology 53.33%, Zoölogy 100%, and Bionomics 100%.

The men are below their class percentage in Greek 0%, Latin 25%, German 22.22%, Romance Languages 0%, English 26.08%, Psychology 0%, Education 50%, Mathematics 50%, Physics 50%, and Entomology 50%.

Class of '00.[1] The women constitute 46.09% and the men 53.91% of the class, the numbers being 53 and 62 respectively.

The women are above their class percentage in German 81.82%, Romance Languages 100%, English 75%, Education 60%, History 50%, Botany 66⅔%, and Hygiene and Organic Training 100%.

The women are below their class percentage in Greek 0%, Latin 42.86%, Classical Philology 0%, Economics 11.76%, Mathematics 33⅓%, Physics 0%, Chemistry 0%, Physiology 28.57%, and Zoölogy 40%.

The men are above their class percentage in Greek 100%, Latin 57.14, Classical Philology 100%, Economics 88.24%, Mathematics 66⅔%, Physics 100%, Chemistry 100%, Physiology 71.43%, Zoölogy 60%.

The men are below their class percentage in German 18.18%, Romance Languages 0%, English 25%, Education 40%, History 50%, Botany 33⅓%, and Hygiene and Organic Training 0%.

Class of '01.[2] The women constitute 63.58%, and the men 36.42% of the class. the numbers being 96 and 55 respectively.

The women are above their class percentage in Latin

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[1] Psychology, Drawing and Painting are not represented. Ethics from this time on is merged with Philosophy. Entomology and Bionomics are both merged into Zoölogy. Hereafter they will not be carried separately, but in conjunction with the departments in which they are now classified. If they had been so classified throughout the study no important change in results would have occurred save that in the years 1898 and 1899 the women would have lost Entomology in which they were above their class percentage, and the men would have lost Bionomics in which they were above their class percentage; by adding these two departments to Zoölogy, the percentage in Zoölogy would be unchanged in '98 and the men largely predominant still in '99.

[2] Greek, Psychology, Drawing and Painting, and Hygiene and Organic Training are not represented.

88.66⅔%, German 100%, Romance Languages 100%, English 76.47%, History 68.75% and Botany 100%.

The women are below their class percentage in Classical Philology 50%, Education 50%, Economics and Sociology 0%, Mathematics 50%, Physics 0%, Chemistry 14.29%, Physiology 33⅓% and Zoölogy 25%.

The men are above their class percentage in Classical Philology 50%, Education 50%, Economics and Sociology 100%, Mathematics 50%, Physics 100%, Chemistry 85.71%, Physiology 66⅔%, Zoölogy 75%.

The men are below their class percentage in Latin 13.33⅓%, German 0%, Romance Languages 0%, English 23.53%, History 31.25%, and Botany 0%.

Totals for the Eight Years. The whole number of graduates in the departments mentioned was 894. Of these 416 or 46.53% were women, and 478 or 53.47% were men.

By reference to the accompanying table it will be seen that the women are above their percentage of the total number of

	Totals for '94,' 95, '96, 97.					Totals for whole period.				
	Total.	Men.	Per cent.	Women.	Per cent.	Total.	Men.	Per cent.	Women.	Per cent.
Greek,	9	8	88.88	1	11.12	16	13	81.25	3	18.75
Latin,	32	13	40.62	19	59.38	72	22	30.55	50	69.45
Classical Philology,*						9	6	66⅔	3	33⅓
German,	19	9	47.36	11	52.64	60	15	25	45	75
Romance Language,	5	1	20	4	80	22	2	9.09	20	90.91
English,	80	24	30	56	70	178	48	26.97	130	73.03
Psychology,	2	2	100	—	—	3	2	66⅔	1	33⅓
Ethics and Philos.,	3	2	66⅔	1	33⅓	4	3	75	1	25
Education,	23	12	52.17	11	47.83	52	26	50	26	50
History,	66	54	81.81	12	18.19	148	93	62.84	55	37.16
Economics & Sociol.,	35	32	91.42	3	8.58	74	69	93.24	5	6.76
Mathematics,	15	9	60	6	40	35	21	60	14	40
Astronomy,*	2	1	50	1	50	2	1	50	1	50
Physics,	6	5	83⅓	1	16⅔	11	9	81.82	2	18.18
Chemistry.	26	22	84.61	4	15.39	57	50	87.72	7	12.28
Botany,	10	4	40	6	60	22	10	45.45	12	56.55
Entomology,*	2	2	100	—	—	6	3	50	3	50
Zoölogy,	11	10	90.90	1	9.10	[24	19	79.17	5	20.83][1]
						[35	26	74.29	9	25.81][2]
Bionomics,*						5	4	80	1	20
Physiology,	44	33	75	11	25	90	61	67.78	29	32.22
Hygiene and Organic Training,	1	1	100	—	—	2	1	50	1	50
Drawing & Painting,	2	—	—	2	100	2	—	—	2	100
Totals,	393	244	62.08	149	37.92	894	478	53.47	416	46.53

*Temporary Departments. [1] Zoölogy alone. [2] Zoölogy with Entomology and Bionomics.

graduates in Latin, German, Romance Languages, English, Education, Astronomy,[1] Botany, Entomology,[2] Drawing and Painting,[3] and Hygiene and Organic Training.[4]

That the women are below their percentage of the total number of graduates in Greek, Classical Philology, Psychology,[5] Ethics and Philosophy,[6] History, Economics and Sociology, Mathematics, Physics, Chemistry, Physiology and Histology, and Zoölogy (either including or excluding Entomology and Bionomics).

The men are above their percentage of the total number of graduates in Greek, Classical Philology, Psychology, Ethics and Philosophy, History, Economics and Sociology, Mathematics,[7] Physics, Chemistry, Physiology and Histology, and Zoölogy.

That the men are below their percentage of the total number of graduates in Latin, German, Romance Languages, English, Education, Astronomy, Botany, Entomology, Drawing and Painting, and Hygiene and Organic Training.

It will be seen that the women are not only above their percentage of the total number of graduates in all the language studies save Greek and Classical Philology, but they constitute from 69.45% to 90.91% of all the graduates of those departments. In Botany, and Drawing and Painting they have 56.55% and 100% respectively; in Education just 50%; in no other subject does the percentage of women nearly reach 50%.

It will also be seen that, whether taken by separate years, by four-year periods, or for the whole time in the total results, the women tend to choose the language studies (except Greek and Classical Philology), Education, Drawing and Painting, and Botany. Men tend to choose Greek, Classical Philology, Philosophy, History, Economics, Mathematics, and the physical and biological sciences (except Botany).[8]

It will be remembered that one of the purposes of this study

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[1] There have been but two graduates, one man, one woman.

[2] There have been but six graduates, three men, three women.

[3] There have been but two graduates, both women.

[4] There have been but two graduates, one man, one woman.

[5] There have been but three graduates, two men, one woman.

[6] There have been but four graduates, three men, one woman.

[7] The percentage in mathematics is undoubtedly affected by the fact that many men students who do a great deal of work in mathematics have their majors in the engineering courses and hence mathematics is not credited with the men who really belong to it. History is similarly affected by majors in the law department.

[8] It might be added that a similar study for the four years from 1901 to 1905 showed little important change save that the women have gained in per cent. in Greek, History, Mathematics, and Physiology and Histology, and lost in Education. They even have a majority in some years in all these subjects and during all years since 1901 in History.

was to see if this experiment in electives gave any data regarding the belief that men and women under existing conditions of society have different intellectual preferences where allowed freedom of choice. It is claimed that this study not only furnishes such data, but that it shows in a pronounced manner the direction of these tendencies.

Another purpose of the study was to see what problems in practical education might be suggested when these results were applied to existing educational conditions. If the intellectual preferences of men and women are different will not those preferences be expressed, intentionally or unintentionally, in courses of study made or enforced by either sex alone? As the educational system now stands the sexes are not equally distributed numerically in the various branches of school work, and have not equal opportunity to influence the course of study. At present the great mass of teachers in the elementary schools are women, in the universities and higher schools they are chiefly men, while in the secondary schools there is greater equality in number though the women are still largely in the majority. In city schools men teachers are usually few in number as compared to women teachers, even principalships and superintendencies, formerly almost always filled by men, are now frequently held by women. This is what some call "femaleization of the schools." It is certainly true that the lower schools, which are those most vitally touching the great mass of the people, are chiefly under the influence of women; the higher schools chiefly under the influence of men.

These facts, in connection with the results of the above study, suggest several important questions which this paper will raise, but will not attempt to answer.

First, if women are to have complete domination over the public schools will the course of study in those schools come to be more and more in harmony with their intellectual likings and tendencies?

Second, if the first question is answered in the affirmative will the course of study come to be more suited to girls, and provide less amply for the peculiar and distinctive characteristics of boys?

Third, may such lack of proper provision for the boys account in part for the fact that boys tend to drop out of school at an earlier age than girls, and, if so, will it tend to increase under present tendencies?

Fourth, is the ideal educational environment, that which brings the child under the influence of men and women about equally, thus balancing the peculiar tendencies of the sexes?

Fifth, since many of the colleges and universities make Latin a prerequisite to entrance to all their important courses, and

hence in order that their graduates may enter the college or university the high schools must make Latin an important part of their course of study, and since we have seen at Stanford Latin is pre-eminently a woman's study, does this in part account for the excess of girls in the high schools?

Sixth, a study of the figures given above for Stanford University will show the women to have been but 29.26% of the class of '94 and with slight variations to have increased from year to year, until in 1901 the women had 63.58% of the class (though the per cent. dropped nearly 10 points in '02), though the average for the eight years is but 46.53%; the women students of the University of California have increased in like proportion to those at Stanford University. Since the high schools are the principal preparatory schools for the universities are the present conditions of sex of teachers and character of course of study in part responsible for the very great increase in the number of women students at the universities?

As was said above, no attempt is here made to solve the questions asked, but it is believed that the paper furnishes some material for a discussion, and if it does furnish that material it will have fulfilled its purpose.

THE COLLEGE WOMAN'S CODE OF HONOR.

(A report prepared by the Child-Study Class of Wilson College in 1905.)

By Amy E. Tanner.

First of all we wish to express our thanks to the college instructors and students by whose aid this report has been made possible. The courtesy and promptness in the responses of the instructors to our letters of inquiry, and the carefulness of the students in answering the questions submitted to them, have put us under deep obligations.

The instructor also wishes especially to acknowledge her indebtedness to the class for the questions and the tables. Any suggestiveness or value that the questions have is due to the fact that they reflect problems which were actually confronting the students at the time and which an instructor usually finds difficulty in viewing from the same standpoint.

In order to get a set of questions which should appeal to the average college woman, each member of the class made out a set bearing upon moral situations with which she herself had been confronted. All the questions were then discussed by the class, and those were selected which bore upon the most common situations and to which the answer was the most doubtful.

The set, as finally issued, was as follows:

The College Code of Honor.

1. Age in years and months.
2. If the conductor neglected to take your fare, would you keep the money? Why?
3. Would you tell your teacher beforehand that your lesson was not prepared or run the risk of being called on? Why?
   If partially prepared, would you bluff if called on? Why?
4.[1] Would you purposely avoid in class or in examination a girl whom you thought would cheat, in order not to have to report her? Why?
5. Would you exaggerate to add interest to conversation, or tell white lies to save people's feelings? Why?
6. Would you take another's plot in developing a supposedly original story? Why?
7. Is it wrong to tell a credulous girl harmless but outlandish and untrue stories? Why?
8. Is it honorable to use a pony, *i. e.*, an interlinear translation, in preparing a lesson? Why?

[1] This question is to be omitted in the colleges where the honor system is not in operation.

9. If you accidentally saw on your neighbor's examination paper one point which would enable you to solve a whole problem, would you use it? Why?

10. Would you allow a person to have an ungrounded favorable opinion of you? Why?

11. Which is more honorable, to cheat openly or secretly? Why?

Returns were received from the following colleges and universities: Bryn Mawr, Vassar, Smith, Holyoke, Woman's College of Baltimore, Swarthmore, Oberlin, Northwestern, Chicago, Butler, Wisconsin and Wilson. The totals were, from Wilson, 114 papers, from all other women's colleges, 163; from coeducational institutions, 163, making a total of 440 papers. This gave us a basis for comparing the large women's colleges with a small one and the women's colleges with the coeducational institutions. The ages varied from 16 to 24 years, with most of them between 18 and 22 years.

Before taking up the returns a few statements as to the character of the questions will not be out of place. We would say first that we were not aiming to discover whether the average college woman is honest in the more common ways. We took it for granted that she does not steal nor does she often lie about important matters. What we attempted to find out was, rather, what she does in cases when a somewhat finer point of morality is involved, and especially when conflicting motives meet. We were trying to find what may be called the growing point of the moral sense, the point where there is considerable difference of opinion as to the right thing.

We would also forestall some possible objections as to the sincerity of the answers. In one or two cases when a request for assistance was made of another college, the instructor wrote that he feared that the returns would not be valuable, because the students would consider the questions too personal to be willing to answer them sincerely. But our experience in Wilson and the internal evidence of the papers from other colleges do not seem to justify this fear. The members of the class, students themselves and mingling with the other students constantly, are convinced that in the majority of cases the students answered the questions with care and sincerity. We feel sure that a few insincere answers crept in and a few careless ones, but so few that they do not invalidate the totals and are not more numerous than in any Child-Study investigation.

On the other hand, it is altogether probable that careless students and students who knew that their standards were lower than those of the average would not fill out the blanks, and so we should not be surprised if these answers gave a slightly higher standard than would be shown if honest answers could be obtained from every member of all the colleges concerned. But even if we grant this, the papers do not lose their

value, because they show the trend of the college ideal and the dominating note of the college.

Finally, no one could read the papers for any length of time without becoming convinced of the undertone of earnestness and sincerity, the attempt to distinguish the idea of the right from the probable yielding to the wrong under temptation, in short, of the genuiue endeavor to give a just valuation of the moral self.

In making out the questions we usually stated them in terms of what the student would do rather than in terms of what she thought right, hoping thus to get a record of facts rather than of theories. In making out the tables, we altered Question 7 to read "Is it right to tell a credulous girl harmless but outlandish and untrue stories?" We did this in order to make the answer parallel those of the other questions, since it thus brings the "right" and "wrong" answers into the same columns as they occupy in the other tables.

We also found that Question 11 should have been worded "less dishonorable" instead of "more honorable." Otherwise there was no difficulty in understanding the answers.

Let us now consider the returns themselves.

Question 2. If the conductor neglected to take your fare would you keep the money?

Of the total answers to this question 46% were affirmative, 51% negative and in 3% of the papers the question remained unanswered. The reasons given for affirmative answers were: conductor's business to collect fare, 17%; if returned might cause conductor's discharge, 10%; might embarrass conductor, 7%; need it more than company, 4%; too much trouble to find conductor, 4%; miscellaneous, 2%; no reason, 4%.

Reasons for negative answers were:—Dishonest, 24%; due to the company, 14%; would hurt conscience, 3%; wrong, 2%; miscellaneous, 2%; no reason, 1%.

About the same number would keep the money as would return it. Of those who would keep it, 17% would do so because it is the business of the conductor to collect and, presumably, not theirs to remind him of his duty. But 17% more would keep it because returning it would injure the conductor in some way. In this class, pity for the conductor takes precedence of the company's right to recompense. An impecunious few think that they need the money more than the company, and a few others, who have evidently been embittered by many experiences, say that it is one chance to get even for poor services or inability to get transfers.

Question 3 (a). If unprepared would you tell the teacher beforehand or run the risk of being called on?

The answers to this question fall into three classes. (1.)

Those who would run the risk, 50%; (2) those who would state beforehand that they were unprepared, 15%; and (3) conditional answers, 32%. 3% of the papers left the question unanswered.

Under the first class the reasons given were: for sake of the mark, 12%; hate to ask teacher, 8%; no question of honor, 5%; chances good, 5%; teacher's duty to find out, 4%; save making up lesson, 3%; foolish to tell, 2%; preparation not expected of all, 2%; miscellaneous, 4%; no reason, 5%.

Under the second class reasons given were: it would be honest, 5%; it would be a comfort, 4%; mark, 2%; better opinion of the professor, 2%; miscellaneous, 2%.

Those who would tell conditionally give the following limitations: depends on excuse, 11%; depends on teacher, 10%; depends on the subject, 3%; depends on amount of preparation, 2%; depends on the chance to escape, 1%; miscellaneous, 4%; unanswered, 3%.

Question 3 (b). If partially prepared, would you bluff if called on?

67% of the answers to this question were affirmative, 22% negative and 4% conditional. 6% left the question unanswered. Reasons given for the affirmative answers were: make effort and run chances of getting it right, 14%; to get credit, 10%; trains the reason, 10%; tests general knowledge, 4%; teacher is able to judge lesson, 4%; not dishonorable to recite one's own thought, 3%; make good impression, 3%; tests general knowledge and trains reason, 3%; shows cleverness, 1%; deserve credit for some work, 1%; miscellaneous, 6%; indefinite, 8%.

Negative reasons were: cannot bluff, 8%; dishonorable, 5%; wastes time, 2%; foolish, gains nothing, 1%; miscellaneous, 1%; indefinite, 5%.

Conditional reasons were: depends on how much I know, 2%; circumstances, 1%; miscellaneous, 1%; indefinite, 0%. unanswered, 6%.

One-half of these students would take their chances of being called on if they were unprepared, while 67% would "bluff" if partially prepared. In the first case, 31% would tell the instructor, if they had a good excuse, or if the instructor expected such explanations or was, shall we say, "easy?" Only 14% would tell under any conditions, and of that number only 5% would do so because it is honest. The rest wish to make sure of not failing in recitation, or to save themselves the worry of the suspense. Most of those who would not "bluff," confess frankly that they lack ability, not inclination.

Those who would take their chances of failing and "bluffing" seem, on the whole, to look upon the recitation as a contest of

wits in which it is the teacher's business to find out the student's ignorance and the student's to conceal it. The student is justified in making a good show, and the instructor, presumably, in piercing below this show to the reality. It is not dishonorable, they say, to give one's own thoughts. It trains the reason to think out an original answer, it shows cleverness to make up an acceptable answer, and in all cases the student ought to get credit. Furthermore there is the idea that it is silly to tell, that it is making a fuss over nothing and being conscientious to the point of foolishness. There is also an element of excitement in the other that appeals to the adventurous mind.

Question 4. Would you purposely avoid in class or in examinations a girl whom you thought would cheat, in order not to have to report her?

64% of the total number answered this question in the affirmative and 32% in the negative. Unanswered, 4%.

Affirmative reasons were: dishonorable or hard, 29%; hurts the girl and gets her ill will, 13%; keeps self from chance of helping her, 5%; moral cowardice, 2%; miscellaneous, 11%; no reasons, 5%.

Negative reasons were: supports the honor system, 17%; right to report her, 7%; miscellaneous, 5%; no reasons, 3%.

This question needs some especial explanation. By the honor system is meant such a method of conducting recitations and examinations that the students are made responsible for preventing cheating. As conducted at Princeton and as introduced here, this is done through the medium of a Students' Committee, consisting of students from the different classes. All the students agree that if they see any cheating done they will report it to this committee, which then will examine into the case and, if necessary, recommend a penalty to the faculty. In conducting examinations, then, the instructor gives out the questions and leaves the class to itself.

When it was first proposed to introduce the system here, there was much discussion on whether the students would appreciate the necessity of reporting enough to do so if necessary. It was known that cheating had gone on somewhat in the past —nobody knew just how much—and it was felt that unless some students realized that the others would expose them in their wrong doing, they would only cheat more under the honor system than before. The point was therefore made repeatedly that it was a social obligation for a girl not only to refrain from cheating herself but to prevent others by all possible means and, if necessary, by reporting cheating.

The principal argument brought against such reporting was that it is contemptible to tell tales. The answer made to this

repeatedly was that under Faculty government, when the reporter assumes more or less the profession of a spy, tattling deserves all the contempt that it gets, but that under a democracy, such as student government is, each member of the college must be responsible for preventing wrong doing, if the government itself is to stand. Of course the comparison was constantly made between this and the duty of a good citizen to prevent a crime.

The table shows the result of this discussion very plainly. Of the 114 Wilson students, 52% would not avoid the suspicious character, as against 16% of the 75 Bryn Mawr students and none from other institutions. We should say, at this point, that the honor system is not in operation in these institutions and the answers are scattering ones given by students who did not understand that the answer was not called for. They have proved interesting, however, as showing the different conceptions of the student's duty to others when he governs himself and when he is governed by others.

Of the Wilson students, then, 52% stood ready to support the honor system to the extent of reporting a girl if they saw her cheating. Most of the 47% who would evade their responsibility are still giving the old reason that it is contemptible to tell tales, even if it is the only way to prevent wrong doing.

Question 5 (a). Would you exaggerate to add interest to conversation?

To this question there were 50% affirmative answers, 42% negative and 8% of the papers left the question unanswered.

Reasons for affirmative answers were: causes amusement, 23%; tends to social comfort, 4%; natural to do so, 6%; justifiable, 1%; allowances always made, 2%; approved by rhetoric, 2%; miscellaneous, 4%; no reason, 8%.

Reasons given for negative answers were: leads to lying, 16%; unnecessary, 5%; truth always best, $\frac{3}{5}$%; miscellaneous, 4%; no reason, 16%.

Question 5 (b). Would you tell white lies to save people's feelings?

To this question there were 65% affirmative and 21% negative answers. Unanswered, 15%.

Affirmative reasons were: causes happiness, 21%; increases social comfort, 8%; sense of pity, 11%; harmless, 5%; natural, 3%; justifiable, 4%; duty, 5%; desire for popularity, 1%; miscellaneous, 6%.

Negative reasons were: tends to lying, 8%; unnecessary, 4%; truth always best, $\frac{7}{10}$%; a lie is a LIE, 3%; miscellaneous, 2%; no reason, 3%.

One of the interesting things about this question is the dif-

ference in the answers to the two parts of it. Whereas 42% would not intentionally exaggerate, only 21% would not tell white lies. That is, only one-half as many would try not to lie as would try not to exaggerate.

The difference is explained by the reasons given. The lie is excused because it leads to greater happiness while the exaggeration is condemned because it leads to lying pure and simple. When excused, the reason is much the same as for the white lie, that is, that it leads to greater social comfort in the way of amusement or happiness. The reason for telling the white lie is, almost without exception, a social one.

Some of the miscellaneous answers throw interesting side lights on the workings of the college woman's mind. Some say that the white lie is Christlike, that love is of more value than truth. Others assert that the truth should be treated in a broad minded way, or that there is a tacit social understanding that some deception is allowable. Others condone it on the ground that bluntness is stupid, while still others lament that they cannot lie without being discovered.

Altogether, it is interesting to know that 65% of the students with whom we deal are sufficiently solicitous of our feelings to tell us white lies, while 50% appreciate a good story enough to invent telling points as they narrate.

Question 6. Would you take another's plot in developing a supposedly original story?

11% of the answers were affirmative, 87% negative, and 3% left the question unanswered.

Those answering in the affirmative gave as reasons: there is no original plot though it may have original treatment, 9%; great writers do, 2%.

Reasons for negative were: It is dishonorable, 77%; prefer own plot, 7%; miscellaneous, 1%; no reason, 1%.

This question calls for little comment, as the answers are nearly all agreed. The interesting thing in it is the attempt of those who would use the plot to line themselves up with Shakespeare. To them a closer study of his characters and the way in which he used the material of others are recommended.

Question 7. Is it right to tell a credulous girl harmless but outlandish and untrue stories?

37% would and 53% would not do this, while 10% did not answer the question.

The reasons for telling such stories were: teaches the girl to be less credulous, 18%; not wrong if she is told afterward, 10%; not wrong if done merely for amusement, 3%; does no harm, $\frac{4}{5}$%; miscellaneous, 3%; no reason, 1%.

Reasons against telling such stories were: dishonest, 25%;

makes girl ridiculous or hurts her, 5%; effect on credulous girl unfair to her, 5%; wrong principle to follow, 2%; amusing but wrong, $\frac{8}{5}$%; teaches the girl falsity, $\frac{4}{5}$%; makes her more credulous, 3%; harms her, 6%; miscellaneous, 3%; no reason, 3%.

The credulous girl does not fare so badly as we had thought that she would. Only 36% think it right to "jolly" her as against 52% who think it wrong. Even with this 36%, the real motive in half of the cases, that is with 18%, is solicitude for the girl. They are only trying to teach her to be less credulous and so better able to fight the world. They are almost as solicitous for her welfare as the girls who would not tell her stories, for of the latter class only 19% consider the effect on the girl, while 27% are thinking of their own soul's salvation. From this point of view, the girls who would "do" the credulous one appear as in truth self-sacrificing individuals who would run the risk of becoming dishonest in order to serve a fellow mortal. It sets them beside those who tell white lies to save people's feelings and exaggerate to contribute to the gayety of society.

Question 8. Is it honorable to use a pony, *i. e.*, an interlinear translation, in preparing a lesson?

21% of the students answering this question said yes, 48% no, and 28% gave a conditional answer. 3% did not answer.

The reasons given for the affirmative were: if used after preparation gives careful translation, 8%; saves time and work, 3%; gives run of story, 2%; harms no one but self, 1%; same as notes in book, 4%; miscellaneous, 1%; indefinite, 2%.

Reasons for negative answers: deception in some form, 15%; weakens one's ability, 12%; gets credit for work not done, 10%; unfair to rest of class, 8%; miscellaneous, 2%; no reason, 1%.

Conditional answers: depends on attitude of teacher, 20%; depends on way translation is used, 4%; depends on advancement of pupil, 2%; miscellaneous, 2%.

Only 48% condemn the use of a pony unconditionally, 28% would use it under certain conditions, and 20% justify its use generally. Most of those who condemn it do so because it involves some sort of deception or unfairness, while only 12% realize the weakening effect upon the student. Most of the conditional answers vary with the attitude of the instructor, thus implying again that the harm in the use lies in its dishonesty or unfairness.

Question 9. If you accidentally saw on your neighbor's examination paper one point which would enable you to solve a whole problem would you use it?

There were 25% who answered this question in the affirma-

tive, 56% in the negative and 14% gave indefinite answers. Unanswered 5%. Reasons for affirmative answer: would have thought of point later, 9%; not truly ignorant, 6%; fear failure, or low mark, 4%; seen unintentionally and no dishonesty involved, 1%; would use it and tell instructor of the predicament, 2%; could not resist temptation, 1%; miscellaneous, $\frac{3}{5}$%.

Reasons for negative answer: dishonest, 30%; dishonorable, 16%; hurt conscience, 3%; respect for honor system, 1%; resistance strengthens self, 1%; no possibility of seeing a point accidentally, 1%; miscellaneous, 3%; no reason, 3%.

Indefinite answers: would probably use it, 3%; would probably not use it, 2%; would avoid seeing the paper, 2%; never in such a position, 2%; uncertain, 1%; miscellaneous, 2%; no reason, 1%.

One-fourth of the students confess frankly that they would use a point seen accidentally, and 14% give indefinite answers. The reasons given are especially interesting, because they involve some psychological subtleties. Out of this 25%, 14% consider themselves really entitled to the point either because it is not fair that they should get zero on the question when they know most of it, or because they are sure that they would have thought of it later, or because they had once known it and are failing only in memory, not in application or in reasoning power.

Some admit frankly that they are afraid of failure or cannot resist temptation, but on the whole those who would use the point seem to be somewhat given over to questions of casuistry.

The great majority of those who condemn the point, on the other hand, do it simply on the ground that it is dishonest, without going into any subtleties of analysis.

It would be interesting to know how many of the answers to this question refer to actual experiences. In the cases that have come under observation, the temptation has usually been too strong.

Question 10. Would you allow a person to have an ungrounded favorable opinion of you?

Of the answers to this question, 54% were affirmative, 33% negative and 12% conditional. Only 1% left the question unanswered.

Reasons for affirmative answer: it is an incentive, 13%; vanity, 9%; not responsible, 7%; difficulty in explaining, 5%; truth will out later, 4%; balance the unfavorable opinions, 2%; not harmful, 3%; miscellaneous, 4%; no reason, 7%.

Reasons for negative answer: deception, 11%; truth will be discovered and a still worse opinion formed, 6%; desire to be

known as true self, 4%; would feel uncomfortable, 5%; miscellaneous, 2%; no reason, 6%.

Reasons for conditional answer: depends on the person, 3%; depends on the importance of the opinion, 3%; uncertain, 3%; miscellaneous, 11%.

The fact that 54% would not remove an ungrounded favorable opinion, as against 33% who would, shows once more the essentially social nature of the college woman. The good opinion would serve as an ideal to strive for, for 12%, and would gratify the vanity of 9% while it would make 5% uncomfortable, who yet could not remove it without creating a most embarrassing position.

The miscellaneous opinions here bring out all kinds of views. Some think that this opinion would only balance other unfavorable opinions; others hint that they are never sure what the opinion really is; still others, that their judgment of themselves ought not to be preferred to that of others, that those others have a right to their own opinions, or that it is unkind to enlighten them!

Deception is the leading reason for not allowing the opinion to remain, while fear of discovery and a consequent worse opinion comes second. One student is so ingenious as to observe that if you maintain that you are not worthy of so high an opinion, the person will form a still higher one!

Question 11. Which is more honorable, to cheat openly or secretly?

In replying to this question 67% considered it more honorable to cheat openly, 5% to cheat secretly and 27% considered either form equally bad. There were $\frac{4}{5}$% ambiguous answers and $\frac{8}{5}$% left the question unanswered.

Reasons for preference for open cheating: less deceitful, 37%; less dishonest not to attempt concealment, 13%; risk of punishment, 6%; braver, 2%; miscellaneous, 2%; no reason, 5%.

Reasons for preference for secret cheating: does not set bad example, 1%; less bravado, 1%; less deceitful, 1%; miscellaneous, $\frac{1}{10}$%.

Open and secret cheating are considered equally bad by 27% of the students, and open cheating more honorable than secret by 67%. By far most of the reasons assigned for this view are that it is less deceitful. The girl runs the risk of punishment then and is braver than if she cheats secretly.

Those who prefer secret cheating do so because it does not set a bad example or shows less boldness, but they are in a hopeless minority, amounting in all to only 5%.

This point of view is interesting to the instructor, as he is likely to be especially irritated by the open cheater, whereas

the moral sense of his students would not condemn her as much as it would the secret one. Perhaps this explains to some extent why a girl who seems to have a somewhat obtuse moral sense is sometimes popular even with girls who do not approve her acts. They know that she does wrong, but, since she makes no secret of her sins, they think that she gets even more condemnation than is due her.

COMPARATIVE TABLE OF TOTALS.

Question	AFFIRMATIVE.			NEGATIVE.			CONDITIONAL.		
	Wilson	Other Women's Col'ges	Co-educational	Wilson	Other Women's Col'ges	Co-educational	Wilson	Other Women's Col'ges	Co-educational
No. 2	34%	53%	48%	60%	43%	52%			
*3A	64"	54"	34"	11"	13"	16"	23%	23%	42%
3B	71"	72"	59"	18"	18"	30"		6"	2"
4	47"	72"	95"	53"	16"	5"			
5A	60"	53"	42"	35"	35"	51"			
5B	68"	70"	56"	16"	14"	30"			
6	6"	6"	18"	94"	91"	77"			
7	25"	40"	41"	56"	59"	45"			
8	31"	21"	13"	54"	44"	46"	10"	32"	37"
9	22"	18"	33"	53"	70"	44"	16"	8"	18"
10	62"	58"	45"	26"	30"	41"	14"	9"	14"
†11	2"	⅘"	0	66"	10"	68"	29"	29"	19"

Actual numbers on which the table is based: Wilson College, 114 replies; other Women's Colleges, 163 replies; Co-educational Institutions, 163 replies.

* The affirmative answers indicate those who would run the risk; negative, those who would tell.

† The affirmative answers indicate those who would cheat secretly; negative, openly; conditional, equal condemnation.

Let us now compare the coeducational colleges with the women's, and the larger women's colleges with the smaller.

There are practically no differences between the larger women's colleges and the smaller one except in Questions 2, 4 and 7. In these cases the standard of the small college is higher. In Question 2, the difference is possibly due to the fact that, as there is but one short car line here, the Wilson students have been left with more tender consciences than those from the other colleges, most of which are situated in or

near places of some size. The class, however, has little confidence in this inference. The differences in Questions 4 and 7 are probably due to the fact that previous to the answering of these questions, the subjects had been rather fully discussed throughout the college. Probably on this account all of the returns are somewhat higher in their standard than they would have been if collected four months earlier.

In comparing the coeducational with the women's colleges, we find some noticeable differences. Contrary to the general opinion, a much larger per cent. of women in the women's colleges would run the risk of being called on if unprepared than would in the coeducational institutions, and a noticeably larger per cent. would "bluff."

Questions 5 and 10 should also be grouped with Question 3, as much the same state of mind seems to be involved in all cases. The girl who would run the risk of being called on, who would "bluff" if called on, and who would rest upon an unearned reputation, would probably be the girl who would enjoy exaggerating and who would hardly be troubled by a white lie. At least the per cents for all these points are curiously alike in the women's colleges and are considerably larger than those from the coeducational institutions. In the matter of using a "pony" the women's colleges are also less sensitive than the coeducational, while the reverse is the case in regard to using a point accidentally seen.

There are but two things which are almost universally condemned by all the colleges, that is, using another's plot and cheating secretly.

In the matter of keeping the carfare, using the "pony," using the point accidentally seen and deceiving the credulous girl, unqualified condemnation comes from about 50% of all the colleges, with considerable numbers doubtful as to what they would do under varying conditions.

The things which are the least condemned are "bluffing" in its two forms of exaggerating and telling white lies, and accepting an unduly favorable opinion. In all these cases the social purpose of the deception and the feeling that the person deceived is more or less at fault for believing everything that he hears, play a large factor in the justification.

In conclusion, then, from the comparative table the college girl appears to be a person with a thoroughgoing contempt for sneaking and out and out lying but with sufficient intelligence and sense of humor in most cases to enjoy any sort of contest with wits even though she risks her scholarly reputation thereby.

Socially she is, on the whole, warm hearted enough to sacrifice the truth in small matters to the demands of friendship and

courtesy, but rarely has she sufficient social sense to undertake the punishment of a wrong doer. She has not yet, except in a few cases, come to believe that the social demand and the demand for truth can both be satisfied as a rule by the exercise of her wits, that is by the cultivation of tact.

Contrary to a somewhat widespread impression, she has few moral finickings. Like the rest of mankind, she is likely to use any available means to attain a much desired end.

Still, even in the cases where she is below the average in her standards, the frank, almost naïve admissions and the reasons given for the views, seem to indicate that these girls, at least, are more undeveloped than bad or were trained in surroundings where success was accounted the right.

To the college instructor the investigation is very suggestive. It would seem that there is practically no danger of deliberate cheating if he leaves the class during an examination, with the understanding that the students are upon their honor, but it is rather dismaying to learn that 20% of all the students are likely to use "ponies" under any conditions, and that 25% would use a point seen accidentally.

It is difficult if not impossible to get rid of the use of the "pony" except by raising the whole moral tone of the college, but the temptation to use the point accidentally seen is more easily handled. Students will usually adopt the suggestion to put a seat between them and their neighbors, and the experience here has been that the students do it without suggestion. If there are not seats enough to allow this, the instructor can usually warn the students beforehand of the psychological subtleties that they will fall into if they do see a point accidentally. College girls are quite open to this sort of appeal because they have imagination enough to appreciate the possible situations.

On the other hand, alas for the unwary instructor who assumes that the average girl believes that she is prepared because she attempts to recite! He is, as the girls say, "easy." His lessons will be the first ones to be neglected when a stress of work comes, his references will be the most hastily read, his articles or themes will never be in on time, because he never allows for the element of humor, exaggeration or bluff in the excuses presented.

But he must also avoid the extreme of considering the college girl as a deep dyed villain because she occasionally wriggles the truth somewhat violently in her attempt to get the better of a difficult situation. Truth, to be sure, is not by nature sinuous, but neither is social morality rigid, and only an appreciation of the latter fact, combined with a sense of humor and at least a rudimentary ability to read human nature, will save the situation for the instructor. A college girl

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will do her best to persuade the instructor that she does not deserve a penalty (which she knows she does deserve), both because she does not want the penalty, and because she would like to feel that she can out-argue the instructor. But when she has exhausted her resources, she will accept the penalty without one particle of rancor, if only she feels that the instructor has enjoyed the argument and that he believes in her essential honor.

The point that is by far the most significant in its wider bearings is the question of the college girl's conception of her social duties. We have seen that the thing that is least condemned is deception for the sake of some one else, while the thing that is hardest for a girl to do is to undertake the reporting of a wrong doer. Is not this directly traceable to the fact that most children are trained to obedience to an outside authority, instead of to self control? Are not our schools, and even our homes, monarchies, more or less absolute, in nearly all cases? How can we fairly expect young people who have always obeyed others, and have looked upon it as the duty of those others to see that law and order prevail, to feel any sense of responsibility for social law and order when they go out into the world? Democracy in the state is doomed to failure unless teachers train for it by establishing democracy in the schools. As long as the teacher lays down the law and assumes the responsibility of enforcing it upon the pupils, the pupils will band together in a more or less explicit defence against the teacher. As long as they are habituated to this condition, so long will they take the same attitude towards the law and its enforcement, and side with the politician who enables them to evade specific laws which are against their narrow interests. A democratic government must prevail in the home and in the school if it is finally to succeed in the state.

So, to return to our data again, perhaps the most important thing for our colleges to do is to take up more explicitly than they have the question of the college students' social responsibilities. As a sub-division of this is the question of how to arouse a feeling among the students that, after all, the one who exaggerates or tells fibs is more stupid than clever, because it always requires more wit to make the truth interesting or kind than to invent a pure fiction. The growing point of the college woman's moral sense seems to lie beyond the question of mere deception, in the conflict between her sense of honesty and her sense of kindness or pity. Surely it is the place of the college to train her mind sufficiently so that she can reconcile the requirement of honesty with the law of love.

A SKETCH OF A BEGINNER'S COURSE IN PSYCHOLOGY.[1]

By Edmund C. Sanford.

In planning a course in Psychology one may look at the subject matter and ask himself, "How may I present this science in the most logical and self-consistent manner?" Or he may look at his class and ask himself, "What sort of psychological knowledge are these young men or young women most likely to find useful, immediately or remotely, in the actual affairs of life?" The course developed will differ immensely as one question or the other is asked; and perhaps I cannot indicate better what is to follow than by saying that I have asked myself the second of these questions rather than the first.

What sort of psychological knowledge, then, is the average beginner in the subject going to find most useful, immediately or remotely, in the actual affairs of life? The average beginner in psychology is *not* going to become a psychologist by profession; he takes the course merely as a part of a scheme of liberal education. He *is*, on the contrary, very likely to become a teacher, still more likely to have a hand in the begetting and the bringing up of children, and is certain to need to deal rationally with a greater or less number of his fellow men. It is knowledge that will assist in these directions, therefore, that he will find the most helpful.

Somebody has defined psychology (with a touch of cynicism) as the science of what everybody knew beforehand, anyway. Now if every man is more or less of a practical psychologist we shall not go far wrong if we take as one of our aims to complete, and clarify, and put a rational foundation under, such current psychological knowledge as is found among the people at large.

I have often thought that a study of current popular psychology would be a very interesting one. I know that one would find many curious things—as, for example, the "spiritualists" with such material conceptions of the soul as to make it 'break away from the body with a series of snapping sounds;' and physicians who refuse to believe in a soul at all because

[1] Read at the Cambridge meeting of the American Psychological Association, Dec. 28, 1905, and earlier in slightly different form at Clark University and the University of Indiana.

they can find no suitable cavity for it in the brain. One would certainly find in the words used many fragments of past psychological terminologies—the system of innate ideas, of faculties, of phrenological bumps—and perhaps most curious of all (and singularly persistent, too,) the conception of the soul as a little manikin within the head that gazes upon and manipulates the images of things brought in by the senses—a genuine begging of the whole psychological question by supposing another mental life exactly like that which is to be explained—an inner self as richly endowed as the more peripheral psychological self that is to be accounted for. But all this is of course superficial and quite different from the real psychological lore upon which men and women, in all relations of life, base their conduct toward one another. We are all practical psychologists in a much more effective way than this. And we have to be; a reasonably good knowledge of practical psychology is of survival value in the biological sense, and those creatures that cannot acquire it pay the penalty. Unlimited quantities of this sort of psychological lore are crystallized in proverbs, maxims and fables the world over; in habits, customs, ceremonies, myths, religious observances, etc., etc., while problems considerably more complicated and more consciously treated constitute the major portion of the most effective parts of poetry and prose literature. Indeed, whatever any man knows of the habits and tendencies of behavior of his fellowmen is just this psychological lore and nothing else.

And it is none the worse for being practical. Solomon probably entertained no definite position on the question of parallelism *vs.* interaction, but his remark about sparing the rod and spoiling the child is based upon a perfectly correct presupposition with regard to the essential psychophysic unity of the body and the mind. Julius Cæsar, when he remarked that men easily believe that which they wish to believe, was not so far behind our modern conclusion that fundamental beliefs are emotional and not rational in their origin. Whoever gave form to the myth of Cupid and Psyche was no mean psychologist. The story is familiar. Cupid and Psyche were married upon the condition that she should never see his face. All went well until her curiosity became overmastering and she stole a look at him while he slept. In her agitation at discovering who it really was to whom she had been married, she spilled a drop of hot oil upon him from her lamp, or woke him in some other way, and he departed never to return. Whoever formulated that myth was in no need to be told that it is fatal to attempt to become cognitively conscious of one's emotions.

These pieces of psychological lore have been picked up by

observation and experience, and most people still get them from experience chiefly—or from tradition or intuition illuminated by experience—and our question then becomes: Can we by a properly arranged course of study facilitate the attainment of this same end? And if we can, how far can we expect to go, and in what way shall we go to work? I believe we can do so, to a certain extent at least. Many things of the greatest importance cannot be learned without actual experience of them, but that experience can be shortened, The way in which I think we might go about it is the programme that I shall presently sketch out for you.

But let us first ask: What in particular ought we to get from such a course? The most valuable result of such a course, after a first-hand acquaintance with a mass of psychological facts, I believe to be a well practiced facility in assuming what I may call the *physician's attitude* both toward one's self and toward those with whom one has to deal. I call it the "physician's attitude" because it is easy to understand that the physician, just so far as he is a physician, is acccustomed to put off the personal relation (whether it be his friend or his enemy that he is called upon to treat) and look at each person as a case, as an organism whose behavior is definitely determined by fixed laws—in whose body cause and effect follow in inevitable sequence. The asylum physician feels no resentment when one of his patients pours out imprecations upon him, charges him with unnamable crimes, and assaults him besides. He simply sees in the patient one whose cerebral mechanism is out of joint, and whose energy, therefore, discharges itself in irregular ways.

The fact is that we are prone, most of us, to be too anthropomorphic, not only in our philosophical and theological speculations but also in our dealings with our fellow men. We project our conscious selves into them, assuming that whatever they do is done with full consciousness and willful intention, and forgetting that there is a vast underworld of unconscious cause and effect that in large measure determines action in accordance with itself. The physician, the psychologist, the teacher, the man of the world—any one in fact, who has to do with his fellow men, should reach a stage where he can instantly slip back and forth, as occasion demands, between the attitude in which the man before him is a man and a brother, and that in which he is a "case"—a human mechanism— another example of the curious interrelations of natural law. All these should be able at once to depersonalize both themselves and the man, woman, or child before them in order to act toward them with insight and intelligence. This physician's attitude should be, I believe, the crown of a properly con-

structed course in psychology—infinitely more valuable than any amount of psychological theory or nice definitions of psychological processes. It will be reached, I believe, by a constant exhibition of the presence of uniformities and natural laws in psychical matters, first in easily accessible phenomena, and later in those which are less usual and more mystifying—or, to come to the matter in the concrete, I would start a class of beginners, with:

1. The Psychology of Acquisition—of learning in all its phases, so far as I could get at it; memory, habit, skill, practice in muscular matters, and in intellectual matters (and incidentally fatigue, attention, emotion, interest, volition), treating each aspect of learning for itself, and treating theoretical aspects only in so far as they would be necessary to correlate the facts, to make clear the empirical rules for economic learning at which we might arrive. I should expect to make the whole as concrete as possible at every stage, and to illustrate and enforce it at every possible point by appropriate demonstrations and experiments. I should expect that the student would not know very many definitions nor very many cut and dried principles; but on the other hand I should not expect him to feel, as is sometimes the case, that psychical phenomena are things not to be found outside the covers of a book, and that certainly never took place in his own consciousness. I should begin here because it is a topic in which each student has an immediate practical interest. He is in the midst of a long course of learning and feels a natural interest in anything that has a genuine bearing on that question; and because the fund of definite psychological information is here tolerably great. I should make the whole as much a matter of mental hygiene and as directly applicable to the daily learning of the pupils as I knew how.

2. Next after that I should take up the Psychology of Truth and Error—in perception, in comprehension, in belief—illusions, prejudices, superstitions, delusions; the psychology of Bacon's idols, the psychology of reasoning and of logical pitfalls; mob psychology and great popular delusions; national prejudices and misconceptions; the psychology of testimony. Upon several aspects of these matters there is already a considerable literature.

3. The Nature and Laws of Emotion, beginning first with the æsthetic emotions—what we think is beautiful and what is ugly, and why we think so—the relation of custom and the unaccustomed to pleasure and displeasure. After this I should go on to the stronger biological emotions, fear, anger and love—their nature, genesis and hygiene. What biological purposes they serve, how they have been modified and refined by

the growth of civilization. How to love and to hate wisely and adequately, so far as one may learn to do so; how to fear those things that should be feared and to despise those that should be despised.

4. I would take up then the Psychological Aspect of Conduct and Character, the psychological basis of ethics. Types of character and temperaments: the criminal and pauper—the mystic and philistine—the natural leader and the naturally led, changes in personality and character, in health and disease, volition and voluntary movements, the formation and influence of ideals, weakness and strength of will; hygiene and diseases of will.

5. My fifth section would deal with the facts of the Interdependence of Mind and Body. (a) What is fixed in human character and make-up, and what can be changed. Heredity, transmitted and acquired characteristics. Instincts, their nature and evolution. And because instincts are embodied in the nervous structures or growth tendencies of the nervous system, I should (b) take that up in outline, physiologically as well as anatomically, and along with it the sense organs and elementary sensations. (c) Hypnotism would come in here also. (d) Outline study of the chief forms of nervous diseases, especially those showing psychical effects—epilepsy and hysteria. (e) Outline study of the chief forms of mental disease. (f) Prophylaxy, means of guarding against diseases of the nervous system and mind. Rest and fatigue.

6. Psychogenesis. The General Biological View of Mind. Its purpose and development in the animal series. Psychogenesis in the child, with particular attention to the stages of development and the degree and manner in which mental growth and development may properly be assisted.

7. Systematization of the Psychological Facts brought out in the preceding sections. Systematic psychology. This might, perhaps, be best managed as a review of the definitions and laws to be found in some small text book. I should expect that the students would know much more already than is to be found within the covers of any small book; that they could pass over it rapidly and would get from it merely a systematization of what they already know.

All the earlier part of the course it would be necessary to give in lectures or assigned readings, or to bring out in discussions. There is, so far as I know, no book that brings together these matters in anything like this order and grouping.

Now what can be said in defence of such a programme? Does it not exactly reverse the usual order of procedure, which gives the theory first and goes on to give the applications later?

And have I not mixed up the subject a good deal, treating several aspects of the same mental phenomenon in several places and taking up topics that imply a knowledge of attention or will or emotion or heredity, before I have taken up these topics themselves? To all of these questions I must reply very emphatically: Yes. I have done precisely that thing; I have done it consciously, and I believe I can justify myself.

Let me reply to the last charge first, that is, as to the order of presentation. I am convinced that there is really no natural and essential order in the presentation of the subject of psychology. In the first place the mind is one; all its various forms of activity are nearly always involved, directly or indirectly, in every mental phenomenon. You cannot treat any one fully without dragging in all the rest. And, in the second place, every young man or woman who reaches the age at which he begins to study psychology already knows enough of what the common psychological terms stand for, to be amply able to understand (with a moderate amount of parenthetical explanation) such a discussion as is here intended of any psychological topic taken up. We are therefore justified in arranging the order of topics according to any other considerations that may seem important, and an indication of such an order may be found in the general standpoint and mental condition of the students who are likely to undertake such a course. It is for this purpose that I have placed large and obviously practical topics at the very beginning.

And why should we not be ready to begin with the practical side of things in any subject that has a practical and definitely useful side, and to go for a long time with only enough theory to keep us out of absolute confusion? I believe that we are in danger of superstition here. We feel that a subject cannot be good educationally unless it is presented in formal manner, and we forthwith conclude that that manner of approach which is most abstractly perfect and calls most obviously for strenuous application is the best possible. As a matter of fact we often teach nothing but a book, or a system, or a skeleton because we do not offer the student any flesh to put on the dry bones that we give him, or we leave him by slow degrees to pick up and apply such flesh as he can.

This I believe to be all wrong. It is true, no doubt, that we do not get to *science* till we do get to this very abstract and desiccated essence. But we must not try to get it short of the processes that naturally lead up to it. The genuine scientific standpoint is something that is not to be reached quickly by every beginner in a subject, and the genuine scientific interest is not to be felt at once by every one who may enter upon a

course in a science. It is something that must grow and be cultivated; it is something esoteric. A class that had passed through such a course as I have sketched would, I believe, be ready to begin with the science, be ready, that is, to attack questions of psychological theory. They would have gathered some feeling for the uniformities that run through the phenomena of the mental world; would be free from some of the popular superstitions about the things of the mind; and a few of them would, perhaps, have laid the foundations of an interest in the real science of mind strong enough to carry them on to the prosecution of studies whose practical bearings all terminate in the advancement of pure psychological theory.

AN EXPERIMENT WITH PUGILISM.

By David S. Hill, Fellow in Clark University.

The art of boxing slowly developed from the leaden cestus of the ancients, to the bare-knuckle stage, and then to the present period of soft, padded gloves. No one will question the degraded condition of pugilism to-day. Yet the fortunes made by pugilists, the thousands who flock to see them, and the extensive space devoted to them in the newspapers, show its wide popularity with men. Pugilism has been killed and resuscitated a hundred times, but it will not down. With the current attempt to save and reform football the question arises what is inherently evil in the manly sports, pugilism included? Is it worth rescuing or shall it be left in possession of those who call the human nose "a claret jug," the mouth, "a kisser," and the eyes, "daylights" or "peepers?"

The status of football calls out many explanations of its degradation. The various college presidents have spoken, the autocratic "committee" has spoken, the President of the United States has been interviewed, and all agree only in that football has degenerated. President Pritchett, one of the latest to speak, says the great weakness in American college life is the separation between the intellectual and social life. There should be more real companionship between student and professors instead of the intimacy between student and trainer or professional coach. Says he: "In some way in our college and in all American colleges, a social life must be developed which shall be the joint life of student and teacher. The absence of such a fellowship upon simple, democratic and natural lines is the weakest point of the American institutions."

Herein we have an explanation of the evils in athletics that goes deeper than an enumeration of the obvious accidental roughness, occasional brutality, demoralization, extravagance and graft. Sports are developed by youths under the personal influence of professional athletes and without real comradeship of cultured men. The result is, sports are perverted. It is a question, therefore, how much there is inherent in athletics that tends towards the abuses so common, and whether these abuses arise out of the lower element actually in control of many sports. Sprinting, a most natural exercise, has become the vehicle of the lowest sharper. Wrestling is in bad odor, even amongst professionals, because of the habitual selling of

matches. Baseball is to-day mostly a business where players are sold in the leagues as horses are traded. College football is sufficiently advertised as an evil. Boxing, in some respects the most popular and natural sport, is in the quagmire of professionalism. The writer has attended championship wrestling matches, sprinting, races, baseball games, and a prize fight; if the tough faces and characters seen in control of the events he has witnessed are representative, the theory that degradation of a sport depends upon those who actually make and control it, is here verified. The principle applies to professional and brutal contests that are promoted in the guise of "amateur" sport. This kind of debasement, especially of boxing, is often practiced as an evasion of the law that prohibits prize fights, and it brings undue censure upon an enjoyable athletic exercise which involves keen activity of body and of mind.

Recently the writer was invited to witness some amateur boxing bouts at one of the largest and richest amateur athletic clubs in America. The bouts supposedly were participated in by members only. Several of the sparrers were recognized as those participating previously in similar bouts in a less pretentious gymnasium where prize fights are held. They had been recruited a few days before by the swell athletic club and, it was stated, were contending for medals only. It was afterwards ascertained that the medals were exchangeable for money. Upon inquiry it was found that the men actually promoting these so-called amateur bouts in this exclusive club were the sporting editor of a sensational newspaper, a notorious man about town, and a professional trainer. This incident is typical of the corruption of a sport by its managers.

Viciousness is not the inherent tendency of football or baseball, or sprinting, or wrestling, or boxing. These afford natural bent for the play instinct, and may be used to develop and stimulate bodies otherwise atrophying under modern civilization, as well as to afford diversion to fagged minds. In the present din of protest aroused by football we may err in discarding modes of exercise that are essential to our race. We do not have to hunt, fight animals and men, cut timber, walk and run like our ancestors, consequently brain centers may decay because of lack of use. Powers of body unexercised because of rapid transit and telegraph and specialization, will atrophy unless we find a substitute for the natural activities abandoned with the growth of civilization. The adolescent period especially demands abundance of animal activity. It would be worth while to establish the fact that athletics, that even pugilism, is not inherently bad and that it is practical to utilize and control it to effective service. Food, drink, the

good things of life, and religion, may be ill used, whereas it is the abuse of good things that brings evil.

In his "Ethics of Boxing and Manly Sport," John Boyle O'Reilly points out that prize fighting is not the aim of boxing: "The boxer in action has not a loose muscle or a sleepy brain cell. His mind is quicker and more watchful than a chess-player's. He has to gather his impulses and hurl them, straight and purposeful with every movement and motion. . . . He has to overcome the keen and precise cunning of an excited brain that is watching him with eyes as bright as a hawk's. The boxer must take as well as give. It is only the bully and the coward who want to *give* all the time, and escape *taking*. . . . The inestimable value of boxing as a training discipline for the development of boys and young men remains. There is no emulation or controversy so hot, so vital, so deliciously interesting as the boxer's."

The writer does not subscribe wholly to the enthusiasm of Mr. O'Reilly's account of boxing, nevertheless he believes boxing may be made useful as an educative factor. To make a practical test of the matter the experiment described in the following pages was performed in a secondary school.

The school in question was a large one devoted to the preparation of boys for college. It was patronized largely by sons of wealthy parents, and many of these boys were difficult propositions for the teacher. Here interscholastic athletics were carefully nurtured, with many evil results. Some of the students passed directly from the school to professional baseball. Inducements of popularity and concessions attracted certain athletic but intellectually idle boys. During the football season the pervading belief in the all-importance of "winning the championship" characterized the team candidates, and the weaker youths were assiduously drilled "to support the team" with yells and songs. The football season ended in the late fall with a collapse of interest and with dissipation in numerous cases.

The experimenter found himself in charge of a department of this school, helpless to control the general policy, but with a hundred boys in his classes. Repeatedly, after Thanksgiving Day, two facts were impressed upon him—first, the lack of a bond of interest and association between pupil and teacher; secondly, the demoralization of interscholastic football. At the same time the lack of constant physical training and exercise for the average student was apparent.

One day the teacher stood before the boys and said: "Boys, I wish to perform an experiment in athletics and I want you to help me. Because I shall have no assistants I will ask for only twenty members—to join a class in sparring. Each boy

who joins must bring written permission from his parents. We are not to learn prize fighting or slugging, but how to spar. Each boy who joins must buy his own gloves of the kind I approve. Because of the disorder and brutality that often attends boxing, I propose to submit the class to a new system of control. You must consent for me to be absolute autocrat of this class and any boy who violates the rule will be expelled. I am not a very good boxer but I have taken lessons and will promise to teach you some valuable things if you will help me. There is a difference between boxing for sport, exercise with gentlemen in a decent manner, and prize fighting,—just as much difference as there is between playing cards at home and gambling in a low dive." The writer then traced the history of boxing, emphasizing the brutality of the exercise wherever abandoned to the professionals and gamblers. He therefore endeavored to make very plain to the boys the necessity of observing the conditions to be enumerated. There were more applicants than the teacher could accommodate. He selected various types, varying from the tough, lazy youth to the sensitive, undersized boy.

The class was conducted in a large hall and no visitors or on-lookers were admitted. The presence of on-lookers can easily spoil a sparring lesson. Each boy was weighed and those of approximately equal weight and strength were paired, and given a station about the room, so that within a radius of twenty feet from the instructor, in the center, were ten couples.

The following simple but rigid rules were formulated and agreed upon:

A. No one shall strike a blow until the bell strikes *one.*

B. All sparring must instantly cease at *two* strokes of bell.

C. Attention must be centered on instructor during intervals.

D. Gloves must be put into boxes immediately at *three* strokes of bell.

Each boy was numbered from one to twenty. Each couple of boys represented an odd and an even number (1-2) (3-4) (5-6). The boys always boxed in light attire to give freedom of movement and to prevent overheating.

They were instructed in the danger of rapid cooling of the body, and the necessity of a "rub down" after exercise was emphasized.

The instructor selected the largest boy for his partner, and stood in the centre of the room. With all at attention, with the large, padded gloves donned, he carefully explained positions of hands, feet, and body; then with a stroke of the bell he put all to practicing these positions. Two strokes of the bell brought all again to attention.

I.
II.
III.
IV.
V.
VI.
VII.
VIII.

He showed them how to strike a straight blow with the left hand and correspondingly how the opposing man should either guard with right, or step back into position. (See figures II–III.) All the boys representing odd numbers were told at first to be on the offensive only, the boys representing even numbers to be on the defensive (guarding or stepping back). The signal, *one*, was given and after a few minutes, the signal, *two*. The even numbers were then told to act offensively and the odd defensively, in the same manner. No other blows or movements were allowed during the first lesson. During subsequent lessons other blows were shown and practiced with the corresponding defensive attitudes or movements. No general sparring was allowed until after the sixth lesson, when some proficiency had been attained, when the last two minutes were devoted always to a bout in which the boys were told to utilize all they had learned.

By that time the pupils had developed the ability of defense, and agility with hands and feet, so that the sparring was both interesting and fast, as well as harmless. Some twenty lessons were given in the course, which was continued for two seasons. At each meeting the lesson for the day was outlined as follows, on the board, and demonstrated by the instructor, who in no sense is an expert athlete. A possible advantage in the system here explained is that it can be utilized after only moderate experience by almost any male teacher. Following are six of the lessons. Notice that on the left are given the movements of offense, and on the right, the corresponding movements of defence. (See figures I-VIII.) Every boy in the class practiced each movement in turn and finally utilized all at will, in the short bouts, controlled by the signal bells, and limited to the rounds of two minutes each. The photographs are actual snap shots of the members of the class taken at the time.

FIRST EIGHT LESSONS.

Offense.	*Defense.*
1. Position.	
2. Straight lead with left.	2. Step back, in position.
3 Straight lead with left.	3. Guard with right and counter with left.
4. Swing with left.	4. Guard with right and counter on body with left.
5. Swing with right.	5. Guard with left and counter with right.
6. Feint with left and lead right to jaw.	6. Guard with right and left.
7. Lead with left.	7. Move head to left and cross-counter with right.
8. Lead with left.	8. Side-step, and cross-counter with right.

The experiment was conducted after the football season during the winters of two years. The boys varied in age from fourteen to nineteen years and in weight from eighty-five to one hundred and sixty pounds. Anthropometric measurements were not taken. The qualitative results observed may be interesting and suggestive of what might be done with a more or less tabooed sport.

Of ill results noted, there were: one case of nose-bleed, one knock-down, and one serious cold was contracted. On the other hand, the boys learned the elements of the sport and acquired some skill, in the comparatively few lessons given, namely, two periods in each week, during after-school hours, for ten weeks of each year. A most valuable result was the establishment of a new bond of fellowship and respect between teacher and pupils. There was little boisterous disorder or slugging, which were inhibited by the simple rules enforced. The boys showed surprising eagerness to join the class. This was manifested by the weak and strong alike.

Psychologists are revealing the destroying effects of fear upon the sympathetic nervous mechanism, especially in youth. The tendency to dissipate all fear was clearly observed. One or two timid and rather feeble boys developed obvious self-confidence and strength. Muscular development in shoulders and arms, and neck was evident, and there was increase of agility and grace of movement. Co-ordination of eye and arm and the ability to use two arms at once were improved. One or two boys inclined to be "bullyish" were tamed by judiciously chosen partners. A wholesome respect and acknowledgment of what the other fellow could do was engendered, together with a consciousness of the power of self-defence. Opportunity was given to the instructor to explain the importance of sleep, proper food, regular habits, and exercise. The primitive, combative instincts were built upon legitimately to achieve a worthy educational end.

The regular athletic trainer expressed surprise that boxing could be controlled where such a large number were participating. Before the course ended there were many eager candidates from other classes. Uniformly the ultimate effect on class work was excellent, some of the boys showing remarkable improvement under the stimulus of new contact with and friendship for the teacher. One case in particular may be noted. *S.* at the beginning of the year was a most unpromising pupil. Older than his classmates, conditioned in several of his studies and threatened with expulsion for insolence, he nurtured a dislike for teacher and school. The boys called him "Wild Bill." In six months "Wild Bill" became the main stay of discipline in our department, removed all of his

conditions, and was promoted in June, a happy youth. He is now in business. A letter to his old teacher received two weeks ago speaks of the physical benefit he derived from the boxing class, of how his mind at school, formerly dull and weary, began "to feel like working" and above all of the confidence in himself there aroused and nurtured. Another one writes: "The club was a success; it was always conducted in an orderly manner, the boys were gentlemanly and appreciated your efforts. Many boys first realized the importance of the art of self-defence and profited accordingly. What we learned benefited us greatly." Another writes: "It is no exaggeration to state that the experience was beneficial to my mental, moral and physical growth. Nothing but good can come from a well planned and properly controlled boxing class."

We do not offer boxing as an entire substitute for football. It has its valuable function, as have tennis, fencing, baseball or swimming. But this experiment, conducted under disadvantageous conditions, demonstrates that the prime cause of evil in athletics can be eliminated. Any athletic game utilizing primitive tendencies and exercising body and mind, when under proper control, is a valuable factor in modern life.

LITERATURE.

La vita dei bambini. PAOLA LOMBROSO. Fratelli Bocca, Editori, Torino, 1904. pp. 208.

This book, by the daughter of the Italian criminologist, is the result of the author's observations and experiments on several hundred children belonging to different grades of society and seeks to unify under one principle, that of self conservation, all the varied manifestations of child life. Chapter I deals with the general topic of the manifestations of this instinct of conservation in children, their tenacity of life and resistance to both psychic and physical pain. The affective life of children and its apparent contradictions are explained by considering all its manifestations as purely utilitarian and egocentric. Children love those who are useful to them, either by direct ministration to their wants or by furnishing to them the sense of care and protection which is necessary to their sense of well being. The child's natural tendency is toward this sense of well being and enjoyment and he instinctively shuns everything which detracts from it. His jealousy is no proof of the existence of affection for the person of whom he is jealous but merely an egoistic demand that he shall be the recipient of all the care and attention given by that person. His natural tendency is toward enjoyment and the play instinct helps him to transform even the commonplace into a source of pleasure.

The subject of Chapter II is the development of language. The author's point of view may be summarized in the statement that in the whole process of the acquisition of language, the child simply follows the line of least resistance and strictly obeys the law of parsimony. He always uses the form of expression which costs the least effort and accepts the explanation which is most in accord with his own experience and so most easily grasped. For the same reason he enjoys repetition and dislikes any change in the accustomed order of his little world.

Chapter III traces the evolution of the child's comprehension of words. A series of words, graded in difficulty, was experimentally tested upon one hundred children of the extremely poor, between six and twelve years, and the definitions carefully analyzed. The same list was also submitted to fifty children from cultured families. It was found that all the words passed through definite stages of development. In the first stage, the content of the word was negative, *i. e.*, the child did not recognize it. In the second stage, the word is interpreted in an arbitrary and erroneous way, the most frequent errors being those of assonance, the confusion of the given word with one resembling it in sound. In a third stage the content of the word is partly approximate,—partly correct and partly erroneous. In the last stage the true content of the word is attained. The poor children were far behind those from cultured families, the ratio being about two to one, *i. e.*, the children from cultured families interpreted the content of the words about twice as quickly and twice as accurately as the poor children.

The subject of Chapter IV is "why children love stories," and the author finds the answer, not in the richness of fantasy in children, but rather in their lack of it. In the natural world the child is sur-

rounded by phenomena which he does not understand, and the marvels of the fairy story seem quite natural to him. He always wants a reason for things, but that reason is most satisfactory to him which he can grasp most easily and fit in with the knowledge which he already possesses. He is instinctively anthropomorphic, and as he is unacquainted with the subtle distinctions between the animal, mineral and vegetable kingdoms, the difference is, for him, practically nonexistent and, like the savage, he is ready to accept life like his own as the explanation of all movement. From the pedagogical point of view, the author regards the story as the natural food of the child's mind and necessary for his normal mental growth.

Chapter V discusses the drawings of children and is illustrated with reproductions of actual drawings. The conclusion at which the author arrives is that the drawings of children are not so much a reproduction of what the child sees as attempts to illustrate the dramatic fantasy of the child's mind.

Chapter VI is a study of the psychology of very poor children. Here the instinct of self conservation, stripped of all the graces and conventions which mark it in children more fortunately situated, is revealed in all its intensity. All their faculties and energies are concentrated on the filling of their hungry little stomachs. Their affections have a frankly utilitarian basis; their ideas of happiness are centered upon eating, so that even the hospital, where perhaps painful operations have been undergone, is regarded as a place of delight because "they have good things to eat there." The crushing yoke of poverty and suffering has left its imprint upon these children and has made them often servile and obsequious and concentrated all their energies and ingenuity upon means of getting the necessities of life. Yet among them are found examples of pride, delicacy and fineness of feeling and an independence which, refusing to be crushed by circumstances, the author considers an indication of a much greater force of character than the same thing in the children of well to do families. Most of them take a philosophic view of the hardships of their lives and accept them as a matter of course without complaint. In mental development they are inferior to the children of the well to do classes; they have less power of concentration and continuity of attention and are less malleable; language is far less developed and consequently they lack power of expression, but in all matters pertaining to practical living they are precocious.

While the author's application of the law of self conservation seems pushed to an extreme hardly compatible with the facts, since in spite of its undoubted truth in many instances, we nevertheless do find instances of self sacrifice and unselfishness among comparatively young children, it does unquestionably call attention to a fundamental truth.

The application of the law of parsimony to the learning of language is most suggestive and explains many but not all of the facts. American children, certainly, do not accept explanations with the readiness and mental laziness ascribed to them by Madame Lombroso. As a whole, the book is an interesting, suggestive, and valuable contribution to the literature of child study. THEODATE L. SMITH.

Native Language and Native Education, by REV. H. A. JUNOD. Journal of the African Society, No. XVII, Oct., 1905. The Macmillan Co., New York. pp. 115.

H. A. Junod, of the Transvaal Swiss Mission, presents a remarkably sensible and able paper on the place of the native language in native education. The usual method takes the child right from the kraal

and teaches him English—the language, grammar, history, a little Shakespeare, etc., assuming that what is good for the whites is also good for the blacks. This is the only mission method which receives government aid. The second and far better method considers the child as a little Bantu having already learned the language in which the mind of his forefathers has been incorporated. The vernacular is kept as the principal medium of education. The readers contain chosen pieces of his own folklore, history of his tribe, descriptions of the natural features of his own country. New ideas of arithmetic, geography and sacred history are explained in his own tongue. Later he begins to learn English as a new tongue with a phrase-book which he must translate into his vernacular. The words are names of common articles of the house and market, things he will have to know in his relations to the whites. Later he is taught a little science. English terms are introduced, where necessary, into his own tongue. English is therefore a higher course and should not supplant the vernacular. It will be a better medium of instruction in a stage which only a few natives will ever reach. The vernacular at the base and English at the top, therefore, is the new method. These children will never want book English, and development for the children is a falsetto thing save through the mother tongue. These aborigines can easily be impressed with English, but their minds cannot move freely in it and there is always an immense loss of meaning between teacher and pupil. They ought to be able even to parse their own language. The old method hinders real development, puts the fabric of life and character on a false basis, tends to conceit and unreality. Their receptive verbal memories, natural to primitive people, enable them to make a fair show of knowledge on a very slender basis and to rest content with words, imitation, half digested notions which will soon be lost. The external way of learning ends in cram. Only by the mother tongue can slumbering powers be awakened and interest aroused, and the child really come to use its brain and be trained in the true sense. The results of the old education do not show any real command of English and in spite of their training the natives take no interest in anything except their cattle. The old education, too, separates the younger generation from their own people and makes them drift to towns and lose all knowledge of their traditions. Let the natives, then, remain faithful to their own mentality. The American negroes have been violently severed from all their surroundings and this makes an anomalous condition which should be a lesson to the English colonies. Connections with the past must be kept as strong as possible. The Bantus should retain their old feudal system and discuss their own affairs in their mother tongue and be men rather than caricatures of white people. This would produce less dissatisfaction. Missionaries preach with better effect in the native tongue. Neither they nor their language will ever disappear. Even in civilized countries patois survives together with an official and literary language. We must not cut them off from their stock of inherited ideas, from an indefinable traditional atmosphere which means so much. The present code is cleverly devised to stamp out the native spirit, ideals and aspiration. To the objection that there are so many native languages that they cannot be taken into account, the answer is that this complication is far less than it seems. There are but three main native languages in all South Africa—Zulu, Suto and Thonga—each with its dialects. Each government would have to deal at least with but two dialects. To be sure, missionaries and teachers will have to go more fully into the study of these languages, but this would be a gain both for science and in winning the confidence of the natives. In

Junod's scheme English is not begun until the fourth school year and some vernacular lessons are kept up to the end of the course. To this end more native text-books are needed; also more grammar and a little scientific encyclopedia, conversation books, and so on. The first duty, however, is to organize thoroughly elementary education in the vernacular. An ideal book is still Colenso's Medley, which is a kind of scientific encyclopedia.

Muzeum czasopismo Towarzystwa Nauczycieli Szkół Wyzczych. Edited by Dr. Boleslaw Mankowski. Vol. XXI, No. 10, 1905.

This periodical is published by a society of teachers in the high schools in Poland and is already in its twenty-first year. It contains a very curious and interesting article describing the boycott which native Polanders have attempted to enforce upon the Russian schools. First there was apathy of parents; then came a revolt in school children which was maintained. Last February they were finally joined by their parents who assembled with Sienkiewicz at their head and sent a petition, signed by thirty thousand parents, asking for Polish schools. On October 3d, 1905, the minister granted permission to teach in private schools all subjects in Polish, and excluding Russian language, history and geography. The writer of this article considers this as a first step to be followed by similar action against the Russian public schools, which he declares to be "equally barbarous."

Le Langage. Essai sur la psychologie normale et pathologique de cette fonction. Par EUGENE-BERNARD LEROY. Félix Alcan, Paris, 1905. pp. 293.

The author here discusses signs and the different forms of language —tactile, auditive, visual, writing, etc.; then passes to the animal perception of language signs; then to the recognition of differences in written and spoken speech. After discussing briefly the receptive side he passes to what he terms the emission of language, discussing the conditions of speech and writing. In the last part he takes up verbal hallucination, treating auditive and kinæsthetic representation, internal articulation, and reading. False verbal perceptions of the various kinds above discussed are treated in a single chapter. Another is devoted to verbal hallucinations which are due directly to internal speech. This he connects with delirium of persecution. The first three parts of the book are a general summary of what is pretty well known by all psychologists concerning the receptive and the motor side of speech. The writer deals in generalities and only attempts a summary and general treatment. The distinctive feature of the work is his theory or rather presupposition that hallucinations in which words play a rôle have some important connection with the psychology of speech, if not, indeed, with its genesis. Most of this part is descriptive. The candid and informed reader cannot say, and, indeed, the author perhaps would hardly claim to have made any new contributions to the subject he treats except some interesting clinical cases, and even the best of these are quoted from the literature of insanity and often from the older literature. At the end of the work he gives some dozen pages of literature but even this is not brought down to date and deals largely with earlier works. The title suggests far more than the book contributes and it is indeed singular to find a work published in 1905 that so ignores the voluminous and extremely interesting work recently done bearing upon the theme treated.

A Few Thoughts on Education, by SIR GOOROO DASS BANERJEE. Thacker, Spink & Co., Calcutta, 1904. pp. 326.

The writer is very modest and claims only to present certain aspects

of education, but he really discusses the entire educational problem of India, which presents many peculiar difficulties. The Indian students have to acquire their knowledge through ihe medium of English. There are many creeds. Yet the indigenous language and literature must also be cultivated. In view of all these problems the author undertakes to describe the ideal requirements of education from infancy through the professional school. The range of knowledge here indicated is remarkable and his suggestions, especially those concerning moral, religious and legal education, are interesting and unique. He shows a great familiarity with the state of educational discussion in Europe, and rare sagacity in solving the problem of the mixed races and Mohammedans, Hindus, the claims of the ancient classics, etc.

State Normal School Systems of the United States, by the Department of Education. University, Eugene, Oregon. University of Oregon Bulletin, Nov., 1905, pp. 43.

In this interesting pamphlet the author has given us a historic sketch of the Normal School System in this country. He also collected answers from a large number of experts, of principals, and superintendents, to two questions. First, is a large central Normal School preferable to a number of Normal Schools? Why? Second, if the State supports a number of Normal Schools, should they be controlled by one separate Board or by separate local boards, or by a combination of the two? It was striking to observe how points differ, and how often it coincides with the number in different localities. If definite conclusions were wanted, the results of this inquiry were interesting, but if general light on many phases of the subject is desirable, this paper is of very high value. This, of course, is far better than definite results.

Saddest of all showings, perhaps, was the question as to the per cent. of Normal trained teachers. Many evaded this question, most thought it increasing. We wished the writer had collected statistics as to college graduation in the faculties of Normal Schools.

Rational Living. Some Practical Inferences from Modern Psychology, by HENRY CHURCHILL KING. The Macmillan Co., New York, 1905. pp. 271.

President King has certainly a genius for putting psychological conclusions to work. He sees, as some psychologists do not, the relation between this department and life. He realizes its complexity and the paradoxes of the mental, moral and even physical life. He respects the lessons of science, believes in the unity of man and is not muddled, as most specialists are, by the relations between the mind and the body, recognizing fully that each has great influence upon the other. He draws well the lessons of the doctrine of the unity of the mind for correct living. Central in importance is the will. Every experience normally terminates in action. This makes a correct and fundamental self-control imperative. Inhibition of will is often the highest moral act. We rarely have a more wholesome doctrine than that here set forth for young men.

The International Correspondence School System of Instruction by Mail and the Results Achieved. International Correspondence Schools, Scranton, Pa., 1905. pp. 1009.

The movement here described may be truly called marvellous. Within thirteen years the records of 650,000 students have been examined and the records of 55,000 have been copied. The latter are about 12.7 per cent. of the number of students who had paid for their

scholarship at the time their names were taken off. 96 per cent. of all begin with arithmetic, of which they have little or no knowledge. Most have but limited time at their disposal, although unlimited time is allowed to complete the course. There are very many technical students. The volume is almost entirely made up of lists of students for each of the many hundreds of grades and topics.

Alaska. Harriman Expedition. Vol. I. Narrative, Glaciers, Natives. Vol. II. History of Geographical Resources. Vol. III. Glaciers and Glaciation.

These sumptuous volumes are summary statements and are to be supplemented by purpose and design. Our space permits no account of these volumes, and it must suffice to say that they will long be an encyclopedia for knowledge pertaining to Alaska. Even this note should not omit the admirable illustrations, many of them colored, and photographs which greatly enhance the value of these volumes.

Sprachpsychologie und Sprachunterricht, von FRIEDRICH BAUMANN. Max Niemeyer, Halle, 1905. pp. 142.

After a careful study of the opinions of Sallwürk, Gansman and Eggert, this author concludes that each of these, his chief predecessors in the pedagogy of modern languages, lays too little stress upon written speech. He criticises Wundt for heresy here. Indeed psychology cannot give any answer. We must always keep in view in teaching the end to be attained, and while the Berlitz school may give superficial and speedy results, its methods never should be used in the Realschule or Gymnasia, because they do not give inner understanding of the language, and, like all modern methods, lay too much stress upon oral work. There is a higher function of speech which only grammar can bring out. The acoustic type of linguists is always inferior. Written speech is the generator and the most important support of higher culture.

The Point of View of Modern Education, by HARRIET A. MARSH. Public School Publishing Co., Bloomington, Ill., 1905. pp. 148.

Miss Marsh has had a long and very successful experience not only as a teacher, but with Mothers' Clubs. She is an inaugurator of several departures in bringing the family and the school together, which have spread far and wide. In this little volume she attempts to state concisely her own educational creed, a part of which is frankly based on voluntary concepts of the body and the soul. The special topics are the growth of the affection; the three nerve centres; the child and his teachers; what the child should learn; influence.

The book does not attempt the novelty or systematic teaching, but will be very valuable in the hands of the practical teachers. A list of readings which can be found in most of the libraries is appended.

School Funds and their Apportionment. A Consideration of the Subject with Reference to a More General Equalization of both the Burdens and the Advantages of Education, by ELLWOOD P. CUBBERLEY. Teachers College, Columbia Univ., New York, Oct., 1905. pp. 254.

The writer first discusses changes in population and education, and selects Massachusetts as an illustration of existing inequalities. He then discusses the school census as a basis, then enrollment and average membership as bases of the proportion of funds, then daily attendance. Equalizing the advantages of secondary education, State subsidies, etc., has done much harm, so that the apportionment in three-fourths of the States of the Union needs careful revision.

Uber Verbrechen und Strafen, von CESARE BECCARIA. Translated by Karl Esselborn.

This valuable work, just translated from the Italian, is devoted to the exposition of a principle which may be briefly summarized as follows. It is a principle which is very different from that which has animated most modern legislation. It is that in order that punishment be not an act of force of one or many against a single citizen, it must always be public, must follow the crime very quickly and necessarily, yet be as mild as the circumstances permit, must fit the crime and be definitely prescribed by law.

A Primer of Essentials in Grammar and Rhetoric for Secondary Schools, by MARIETTA KNIGHT. American Book Co., New York, 1905. pp. 64.

Miss Knight has had a long and successful experience, and in this little handbook, attempts to bring back some of the essentials of the old discarded grammar. She thinks her booklet will serve as a guide for teachers of rhetoric, and aid them to dispose of the ordinary textbooks.

Annual Report of the Board of Regents of the Smithsonian Institution. Showing the Operations, Expenditures and Conditions of the Institution for Year Ending June 30, 1903. Government Printing Office, Washington, 1905. pp. 646.

This interesting volume constitutes a somewhat new departure. After the usual summary of the operations of the year and the report of the curator, etc., the main body of the volume is devoted to the description of the United States National Museum, by Rathbun, and a study of the museums of New York City, Albany, Buffalo, and Chicago, with notes on European Institutions, by A. B. Meyer. There are no less than one hundred and twenty full page illustrations of buildings occupied by National Collections. There are many museums in libraries of which the volume contains many pictures.

Admirable as the work is, it ought to be supplemented by at least one other volume which would be necessary to give an account of more important American Museums.

Are College Entrance Requirements too Great in Quantity? by WILSON FARRAND. The Schoolmaster's Association of New York and Vicinity. Nov. 11, 1901. pp. 16.

The writer shows that entrance requirements have increased and become a great field demanding relief, and makes three propositions. First, to call a halt on the increase which has been going on for so many years; secondly, let the colleges cut off some of the recent additions of individual subjects. The third more radical proposition, which the author thinks may be more feasible with the colleges, urges to lower the preparation to from either fifteen to eighteen points. The author apparently is not aware that Clark College has even gone beyond his own extreme, and abolished entrance examinations altogether.

Journal of Proceedings and Addresses of the Forty-Fourth Annual Meeting of the National Education Association held at Asbury Park and Ocean Grove, N. J., July 3-7, 1905. Published by the Association, Secretary's Office, Winona, Minn. pp. 968.

This is perhaps on the whole the most valuable volume of proceedings that the N. E. A. has ever published. The meeting at Asbury Park was very numerously attended. The outside attractions were great but were by no means as distracting as those the year before at

St. Louis, so that the attendance at the meetings was better. The number of sections into which the association is now broken up, the vast number of papers read, the difficulty of finding suitable auditoriums, is very great, and the trouble in finding one's way about, and often the great distances that have to be covered by the large number who run about from section to section following the attractive speakers, increase greatly the distraction and fatigue. This might be minimized by miniature maps placed in the hands of every member on registration, if not on arrival, which would indicate very clearly the place of meeting of each section for each day and hour. Every one interested in the progress of education as a science will welcome the attempt seen in some of the papers more and more from year to year, and especially in the three supplementary pamphlets on salaries, tenure and pensions, on industrial education in rural schools, and on taxation, to present the results of very carefully prepared studies made both by individuals and committees. It would perhaps be invidious to name individual papers that are contributions of more than transient character, but the number of these is certainly increasing. To our thinking, one of the greatest defects was the extraordinary length of the programme of the mass meeting. The president's address was excellent, its quality even surprising his friends, but its length was inexcusable considering the very valuable papers that were to follow, some of which, like, for instance, Mr. Skiff's, were given to a very small audience. It ought to be safe to assume without a rule to that effect that the president will not use his position to occupy an inordinate amount of time. It is, of course, entirely impossible to review these scores of papers or even to name the best. The council, the meetings of which used to be one of the most interesting, has become one of the dullest. The report on progress of the year was excellent but far too long. The comparison of modern business methods with those of education, shed little light upon either topic. The report on simplification of spelling should have been far more concise and to our thinking the memorial addresses, of which there were five, should be printed and not read. But it would require an essay to discuss the many points suggested by even a brief review of this very many-sided volume.

The Great Schoolmen of the Middle Ages. An account of their lives, and the services they rendered to the church and the world. By W. J. TOWNSEND. Hodder & Stoughton, London, 2d Ed. pp. 361.

Townsend here gives us a work which meets a long-felt need. It is a picturesque story of the Renaissance and the great schoolmen, beginning with Scotus Erigena. The most important writers treated are Gerbert, Anselm, Abélard, Hugo, Peter the Lombard, Avicenna, Averroes, Albertus Magnus, Alexander of Hales, Bonaventura, Aquinas, Duns Scotus, William of Occam, Gerson, with final chapters on the objections to their work and the rationale of scholasticism.

The Heroes of Defeat, by WILLIAM JACKSON ARMSTRONG. Robert Clark Co., Cincinnati, 1905. pp. 599.

This book was received only ten days ago and to-day, despite a very busy life, I have turned the last page. It is a work of a unique kind. The author has studied and travelled extensively and has presented here six sketches of great men, representing great causes, who were overwhelmed by defeat. They are Schamyl, the soldier priest and hero of the Caucasus; Abdul-Kader, the Sultan of Algeria; Scanderbeg, a soldier of Jesus Christ, Prince of Albania; Tecumseh, the Ohioan hero of the forest; Vercingetorix, King of Gaul; and Kosciuszko,

the hero of Poland. Each sketch requires study in a very different historical field and yet each is presented with great vigor, with ample learning and with enthusiasm. It is remarkable that in such very different fields the presentation should be on so high a level. Some of his heroes will seem to the reader greater than others. As a whole, this volume ought to be not only a welcome addition to every historical library, but it has an ethical lift and glow about it that give it a high pedagogic quality. It ought to have a wide circulation. If it does not, the fault will be in the public and not in the author.

Allegemeine Pädagogik in Leitsätzen zu akademischen Vorlesungen, von PAUL NATORP. N. G. Elwert, Marburg, 1905. pp. 77.

This book, by a well known Marburg professor of philosophy, may be cited as an exquisite illustration of the method of treating pedagogy by a German philosopher. First comes an elaborate *Grundlegung* which tells us how far pedagogy is a science and not merely an art. The problem of education is stated; so is that of the *Begriff*. The principle according to which the ideal of culture is developed is enunciated and philosophy is declared the basis of pedagogy. The function of logic, ethics, æsthetics and psychology are concisely stated. The content of culture as a system, its divisions, the field of the intellect, the basal law of its stages of development, the world of will and its laws, that of art, the idea of religious culture, social pedagogy of a culture society, the basal functions of social life, the kinds of social activity: these constitute the first part or the bases of pedagogy, and comprise nearly half the pamphlet. The second part is entitled "Description of the Culture Curriculum." Under the first period of childhood, he discusses the formation of the world of perception, the elements of logical processes in the formation of ideas, language and the beginning of ideas, play and work, culture in the folk school, number and form, speech and writing, real branches, the higher studies, their problem, mathematics and science, the mother tongue, classical languages, living modern languages, sociology, history, development of the will, ethics, school organization as a factor in the building of the will, religion, philosophy and education of teachers. Most of these topics are discussed in less than a page and in terms so abstract and general as to be, to our thinking, very remote from any possible service of any kind. Desiccated definitions, abstract formulæ, which apparently have never been filled with any red blood of meaning for the author, but which are written to put his own meagre mental furniture into some kind of order, seem to be the whole. We have not read the book through, but we have spent a good part of an evening in reading, with all possible attention, many of these sections, and without one scintilla of profit. If this is German pedagogy, let it remain German. If it is philosophy, let us keep philosophy as remote as it here is from any vital contact with school work.

War Inconsistent with the Religion of Jesus Christ, by DAVID LOWE DODGE. With an Introduction by Edwin D. Mead. Ginn & Co., Boston, 1905. pp. 192.

War is inconsistent with the religion of Jesus because it is inhuman, hardens the heart, oppresses the poor, spreads terror and distress, brings fatigue, famine, and destroys youth, multiplies widows and orphans. It is also unwise because instead of preventing it provokes insult and mischief, increases difficulty, destroys property, endangers liberty and happiness, injures the morals of society, hazards eternal things; and finally it is criminal for it is running into temptation, inflames mind, injures conscience, is not doing to others as we wish

them to do to us, is inconsistent with mercy, is not manifesting our love to enemies, but is rendering evil for evil. It is opposed to the example of the Son of God. The author's distinction is that he was an American who founded the first peace society in the world, and this book, first prepared for the press in 1812, is a pioneer work in this field. The author was born in 1774 in Pomfret, Connecticut.

Right and Wrong Thinking and Their Results, by AARON MARTIN CRANE. Lothrop, Lee & Shepard Co., Boston, 1905. pp. 361.

Mr. Crane's sub-title for his book is "The Undreamed-of Possibilities which Man may achieve through his own Mental Control." Perfection is the ultimate goal of man's best and highest aspiration, and it is a great mistake to assume that it is not within our reach. Exalted as the ideal is, it is based on the nature of man, illustrated in the teaching of Jesus. We simply have to apply to ourselves the best of everything we know. If we would do all that we knew, control thinking so as to avoid discordant thoughts, keep the body at the top of its condition, always make moral distinctions, drop the habit of worry and have the benefits of early training, maintain ourselves in a sympathetic state, with a sense of responsibility, practice perfect control, all would follow as a matter of course.

Selections from the Septuagint, by FREDERICK CORNWALLIS CONYBEARE and ST. GEORGE STOCK. Ginn & Co., Boston, 1905. pp. 313.

This is a somewhat bold step on the part of, in some respects, our best American educational publisher. The editors, instead of regarding the Septuagint as an aid to the study of Hebrew, have reversed the procedure, assuming that Greek translation of the Old Testament has occasionally preserved traces of readings superior to those of the Masoretic text which was constituted centuries later. Another unique feature of this work is the grammar of the Septuagint in some seventy-five pages. The text is the story of Joseph which, "whatever else it may be, is one of the best novels ever written," and which bears comparison with the plot of a play of Terence or Plautus. The writers deplore that criticism has laid its hand on a story so beautiful from the point of view of literature. No better illustration could be chosen of the service rendered by modern criticism to the intelligent study of the Bible. The second is the story of the Exodus; then comes that of Balaam and Balak; then that of Samson; then David and Goliath; and lastly Elijah, Hezekiah and Sennacherib.

The State and the Teacher, by SAMUEL AYERS. Principal of Public School, No. 32, New York City, 1905.

These interesting articles urge the duty of the State to provide retirement pay for the teachers, Teacher's Mutual Benefit Associations, Public School Teacher's Retiremeut Funds. It is an interesting and able presentation of the subjects to which it pertains.

Evolution: Racial and Habitual, by JOHN T. GULICK. Carnegie Institution of Washington, 1905. pp. 269.

Rev. John T. Gulick, in the valuable and new inferences which he has drawn from the sharp differentiation of snail species in different Hawaiian valleys, draws as one of his interesting conclusions the following law: That in species well adjusted to the environment, the typical—that is, the average—form of the species is not only the best adapted, but the most fertile. This is a very conservative principle which tends to prevent rapid transformation. So of intellectual variations. Individuals of moderate capacity are more prolific, though less successful in other respects than the intellectual.

Encyklopädisches Handbuch des Blindenwesens, von ALEXANDER MELL. A. Pichlers Witwe & Sohn, Wien, 1900. pp. 890.

This almost monumental volume, with eighty-one portraits of eminent blind people or of their teachers, one hundred and thirty-five other cuts, with its tables and charts, is probably the best summary of knowledge about the status of this type of defective that we have. The print is fine, in double columns, the topics minutely divided and alphabetically arranged. The author's view is broad enough to take in American as well as German and other European publications.

Die wissenschaftlichen Grundlagen des ersten Rechenunterrichts, von ALOIS LANNER. Carl Fromme, Wien, 1905. pp. 49.

This is an interesting and quite analytic study of the processes involved in elementary number study. Great stress is laid upon counting, and adding and dividing are treated most fully. The author has evidently never heard of the Dewey or the Speare method, and there is nothing here that bears upon these views or processes.

The Fifth Year Book of the National Society for the Scientific Study of Education. Part I. On the Teaching of English in Elementary and High Schools, by GEORGE P. BROWN. Edited by Manfred J. Holmes. Bloomington, Ill., 1906. pp. 94.

This society has upon its roster the names of many of the very best representatives of the teaching profession of the United States. The present publication is a rather detailed plan of how English ought to be taught to be made most effective. It is an eminently sensible, practical report that adds little new to our knowledge.

Indian Names of Places in Worcester County, Massachusetts. With interpretations of some of them. By LINCOLN N. KINNICUTT, Worcester, Mass., 1905. pp. 59.

This is a work interesting to all who care for Indian matters, but of special interest to residents of Worcester County, Massachusetts, where perhaps a hundred names of places, here explained and described, are found.

Much Ado About Nothing, by WM. SHAKESPEARE, with notes by Robert Williamson, pp. 126. The Winter's Tale, by Wm. Shakespeare, with notes by T. George Wright, pp. 140. (The Swan Edition.) Longmans, Green & Co., New York, 1905.

These are sample copies of eleven little volumes, each edited and illustrated by various teachers of English, Thirteen in all are to be published. Each is preceded by a brief introduction containing what the pupil most needs to know, and followed by notes, brief and very concise, most of them little more than glossaries. There are then some dozen questions on each act. Each is illustrated by a number of full-page cuts. On the whole, it can safely be said that we have nothing else quite as convenient or judicious.

Shakespeare's King Henry the Fifth, edited by George C. D. Odell, 1905, pp. 146. Shakespeare's Twelfth Night or What You Will, edited by John H. Henneman, 1905, pp. 135. Selections from Spenser's The Faerie Queene, edited by John Erskine, 1905, pp. 179. Palgrave's The Golden Treasury, edited by Herbert Bates, 1906, pp. 459. (Longmans' English Classics.) Longmans, Green & Co., New York.

Here we have the Longmans American edition of more of their English classics, which is now quite extensive. We cannot think that this series is quite equal in form and general style or even in cheapness to

the other forms in which some works of this series are printed, and yet all are valuable additions to the resources of the teacher in English.

Sir Walter Scott. The Lay of the Last Minstrel, with a short biography by Andrew Lang, and an introduction and notes by Fred W. Tickner, pp. 121. Ivanhoe (Abridged), with a biography by Andrew Lang and introduction and notes, pp. 191. The Talisman (Abridged), with a biography by A. Lang and introduction and notes by J. Thornton, pp. 204. A Legend of Montrose (Abridged), with biography by A. Lang and introduction and notes by R. Lishman, pp. 222. (Longmans' Class-Books of English Literature.) Longmans, Green & Co., New York, 1905.

Longmans and Green have done the cause of English teaching in high schools a real service by the publication of the tasteful, but inexpensive, series of which these four works of Sir Walter Scott are specimens. There are about a dozen other standards in the set, including Paradise Lost, Comus, King Arthur, Lays of Ancient Rome, Macaulay's History, etc., costing from a shilling to a shilling and a half each. The type is so clear, the notes so few yet sufficient, the introduction so brief yet stating all that is necessary, that they mark a distinct advance in text-book publication. The longer stories are gained by the abridgments.

New Creations in Plant Life, by W. S. HARWOOD. The Macmillan Company, New York, 1905. pp. 368.

Infant Mortality in Michigan and Detroit, With an Inquiry Concerning a Normal Infant Mortality, by HERBERT M. RICH. Archives of Pediatrics, Vol. XXII, E. B. Treat & Co., New York, Oct., 1905. pp. 10.

The History of Henry Esmond, Esq., by WILLIAM MAKEPEACE THACKERAY. Edited for school use by Hamilton Byron Moore. Ginn & Co., Boston, 1905. pp. 586.

Iroquois in Northwestern Canada, by ALEXANDER F. CHAMBERLAIN. Am. Anthrop. (N. S.) Vol. VI, No. 4. July-Sept., 1904. pp. 459-463. The New Era Printing Co., Lancaster, Pa., 1904.

Public Elementary School Curricula. A Comparative Study of Representative Cities of the United States, England, Germany and France. By BRUCE RYBURN PAYNE. Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, in the Faculty of Philosophy, Columbia University, New York, 1905. pp. 200.

A Boy and his School. What it can and what it cannot give him. By ROBERT L. LEIGHTON. John Murray, London, 1905.

Weiss und Rot, von ISABELLA HUMMEL. Zweite Auflage. J. P. Bachem, Köln a. Rhein. pp. 124.

Turning and Mechanical Manipulation, by CHARLES HOLTZAPFFEL. Holtzapffel & Co., London. Vol. I. Materials; Their Preparation and Figulation. 1878. pp. 462. Vol. II. Construction, Action and Application of Cutting Tools. 1875. pp. 457-1025. Vol. III. Abrasive and Miscellaneous Processes. 1864. pp. 1026-1477. Vol. IV, by John Jacob Holtzapffel. The Practice of Hand or Simple Turning. 1879. pp. 592. Vol. V, by John Jacob Holtzapffel. The Practice of Ornamental or Complex Turning. 1884. pp. 652.

Historical Lectures and Addresses, by MANDELL CREIGHTON. Ed. by Louise Creighton. 2d impression. Longmans, Green & Co., New York, 1904. pp. 346.

The George Washington University Bulletin. Scientific Number. Vol. III. No. 4. Published by the University at Washington, D. C. December, 1904. pp. 119.

Practical Mathematics, by DANIEL A. MURRAY. Longmans, Green & Co., New York, 1905. pp. 113.

NOTE.

The New York Natural History Museum, under its director, Professor Bumpus, formerly of Clark University, has devised very interesting new ways of helping the schools of the city of New York. Teachers and pupils often visit the Museum on public days, Mondays and Tuesdays being reserved for them. They can use the Museum classroom, at which specimens can be collected, with book-lists and a library open all day. They can even procure a simple lunch. There are also large numbers of small collections that are sent to the schools in cases, like library books. These include stuffed specimens of the meadow lark, red-winged blackbird, Baltimore oriole, chipping sparrow, robin, chimney-swift, barn swallow, phoebe, house-wren, bluebird, chickadee, nuthatch, song-sparrow, owl, kinglet, downy woodpecker, crossbill, junco, English sparrow, bluejay, domestic pigeon, scarlet tanager, humming-bird, red-eyed vireo and American goldfinch. There are also collections of insects, too many to mention, mollusks, arthropods, and echinoderms. Each collection is accompanied by a set of notes describing life, history, coloration, structure, nest, eggs, food, care of young, habitat, etc. Some insects like the bee with an observation hive, house-fly, carpet beetle, mosquito, clothes moth, bedbug, milkweed butterfly, and some mollusks like the binal snails, cuttlefish, clams, oysters, whelk, cowry, limpet, big conch, squid, nautilus; also acorn shell, barnacle, prawn, shrimp, fiddler, five species of crab; echinoderms like the sea-urchin, sand-dollar, starfish; worms like the bugula, arrow-worm; various sponges, polyps, jelly-fish, brain corals, organpipes, sea plumes and fans, are described quite fully. There is also a collection of minerals, eight in number, and thirteen rocks, four ores and metals; also ten species of wood. All of these are accompanied by descriptive leaflets to which books of reference for the use of teachers and pupils are appended. We have not seen this work, but we have talked with the director and inspected the material used. It cannot fail to be of the highest value, and in the office a map with various colored pins shows at a glance the large number of schools using these collections and where each is.